# APPLICATION WHITE PAPER —GPON APP NOTE/EXAMPLE

Version V1.0.1

Z

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# DBA profile

| Item | Description | Example |
|---|---|---|
| DBA profile | The DBA of ONU | Assured :10M<br>Maximum :100M |

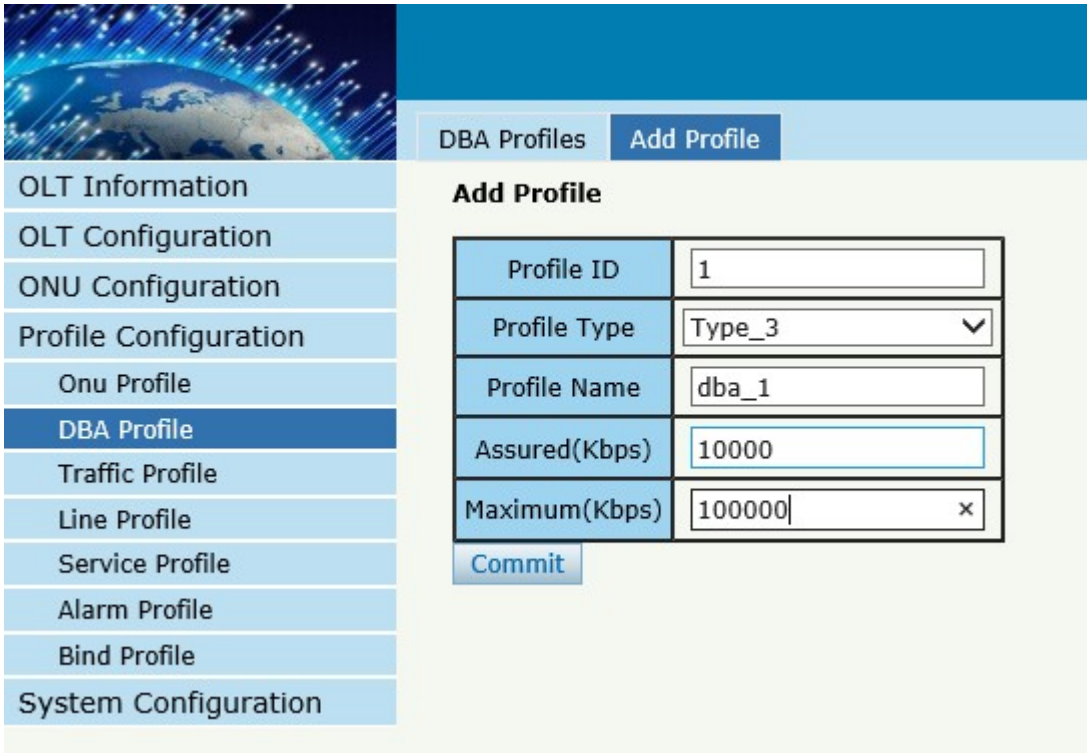
**By CLI** ----------

gpon-olt(config)# profile dba

gpon-olt(profile-dba:1)# type 3 assured 10000 maximum 100000

gpon-olt(profile-dba:1)# commit

**By Web** ----------



# SFU Authorization

## Planning Data

| Item | Description | Example |
|---|---|---|
| ONU Type | The type of onu | V2801ZG |
| ONU SN | ONU serial number | GPON00000015 |
| OLT PON | The PON port of OLT | GPON 0/1 |
| Equipid | The Equipment id of ONU | V2801ZGV8.0 |

## ONU Manual authorize

**By CLI ----------**

gpon-olt(config)# profile onu name V2801ZG

gpon-olt(profile-onu:3)# port-num eth 1

gpon-olt(profile-onu:3)# commit

gpon-olt(profile-onu:3)# exit

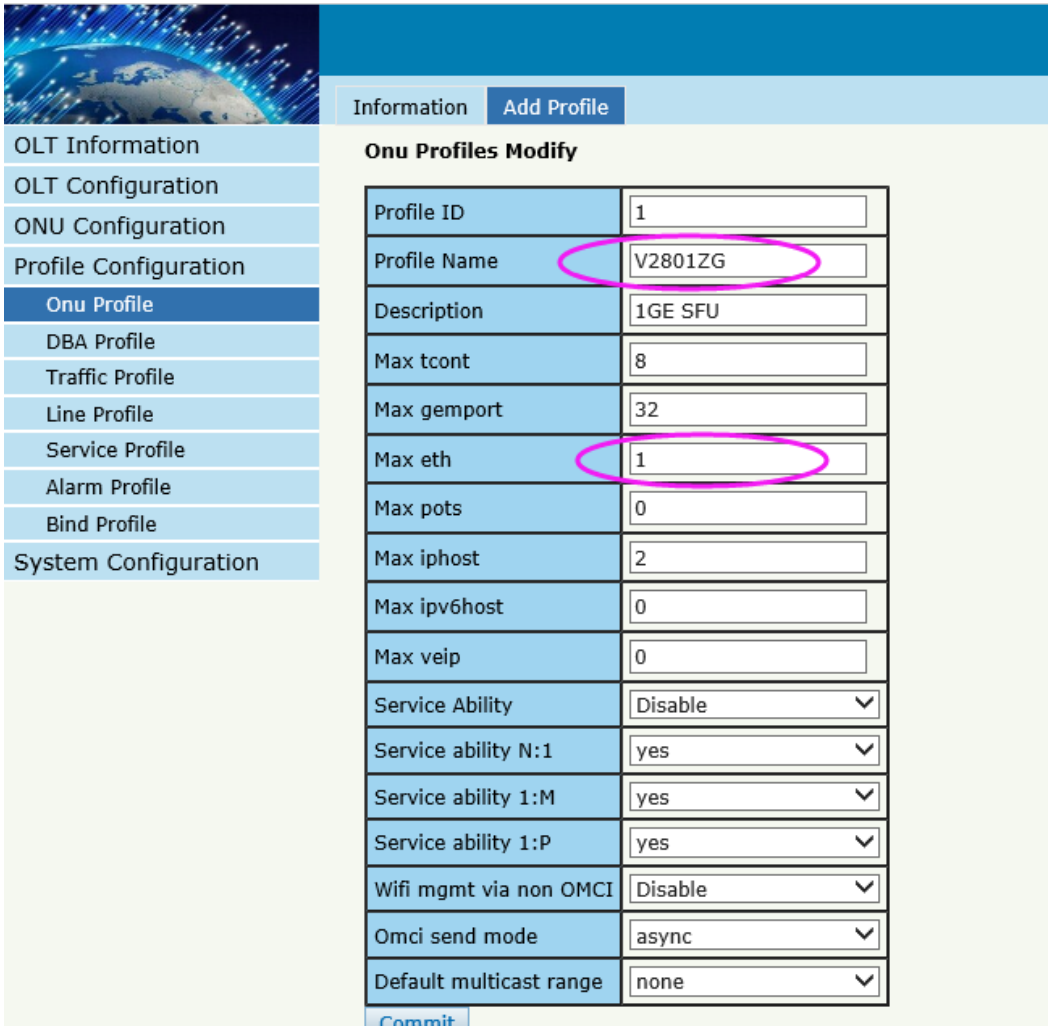
gpon-olt(config)# show onu auto-find

gpon-olt(config)# interface gpon 0/1

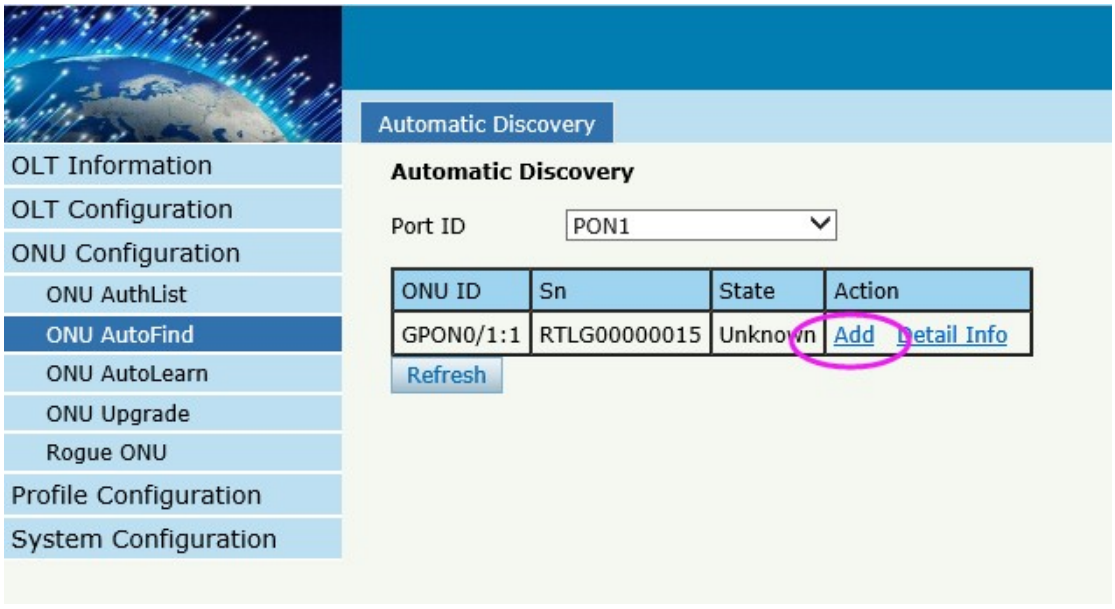
gpon-olt(config-pon-0/1)# onu add 1 profile V2801ZG sn GPON00000015

**By Web ----------**

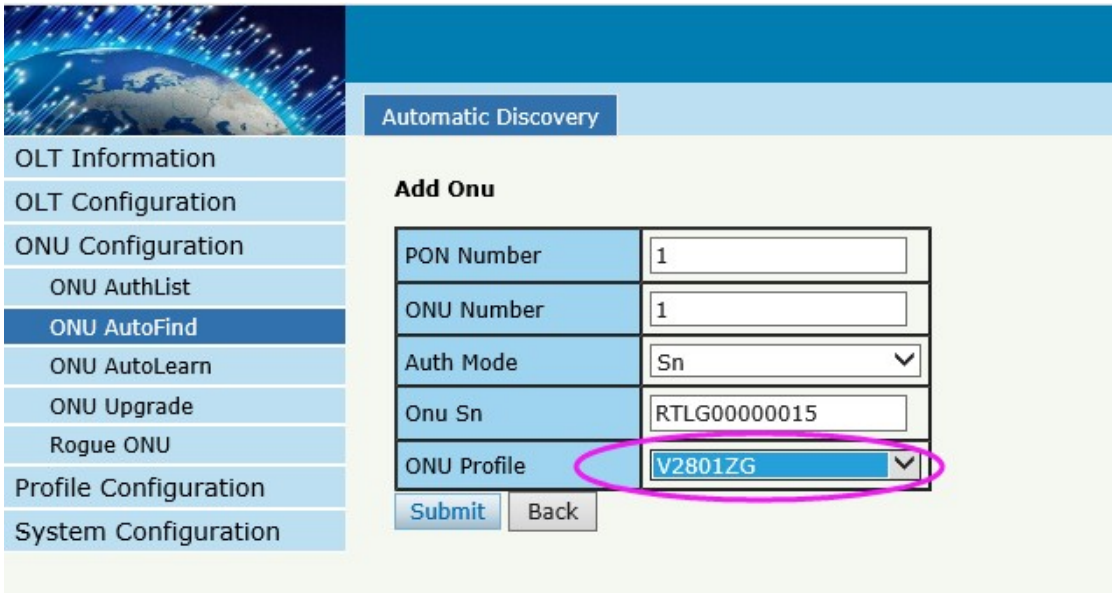
1、Create ONU profile for 1GE ONU



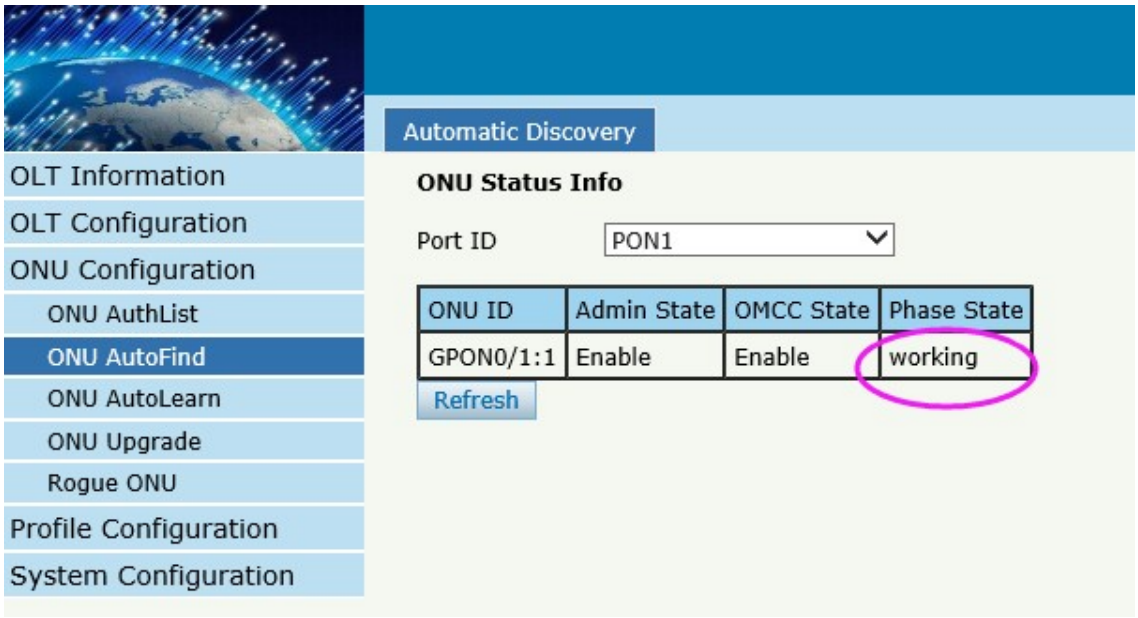

2, Find the ONU of Autofind lists and perform authorization operations on it




3, Select the 1GE ONU template




If ONU is successfully registered, working will be shown here




# ONU automatic authorize

**By CLI ----------**

gpon-olt(config)# profile onu name V2801ZG

gpon-olt(profile-onu:3)# port-num eth 1

gpon-olt(profile-onu:3)# commit

gpon-olt(profile-onu:3)# exit

gpon-olt(config)# show onu auto-find detail-info

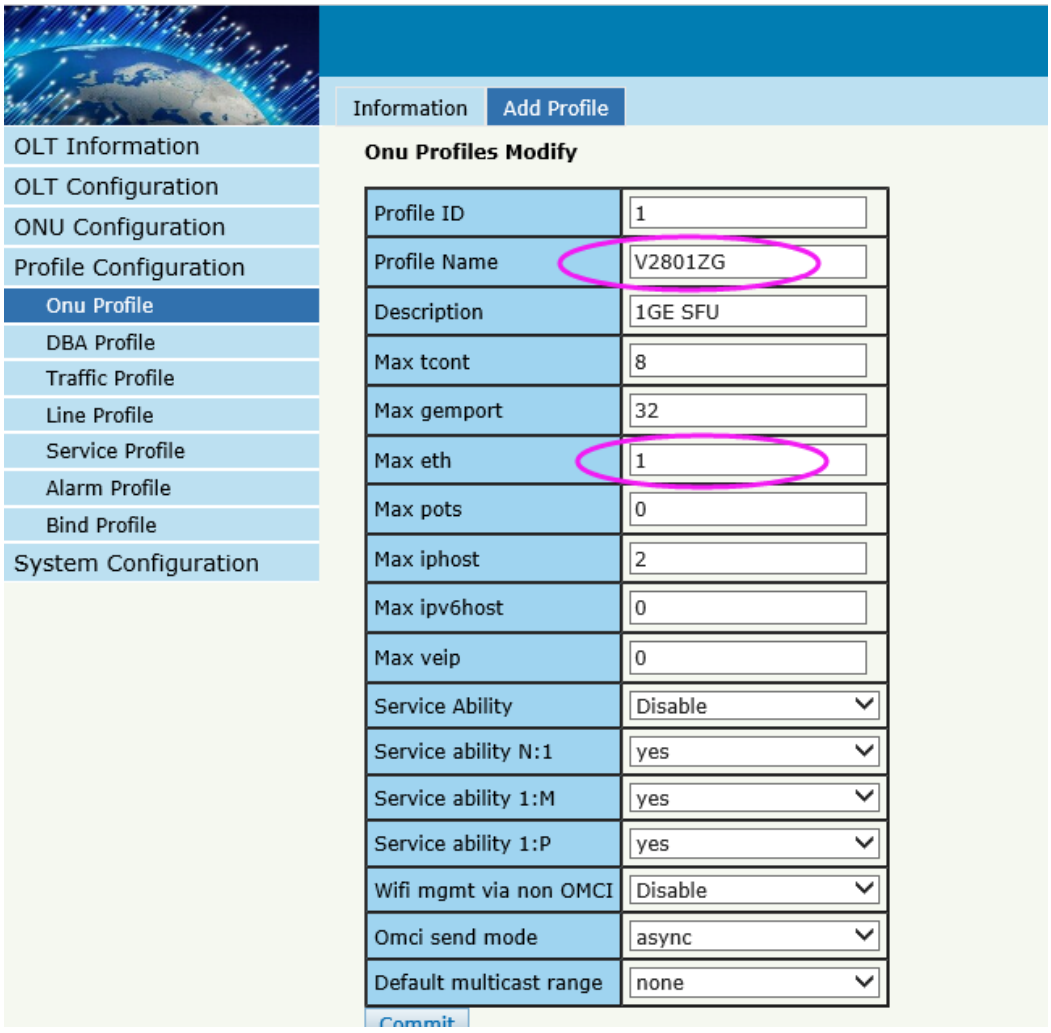
gpon-olt(config)# onu auto-learn bind onu-profile V2801ZGV8.0 V2801ZG

gpon-olt(config)# interface gpon 0/1

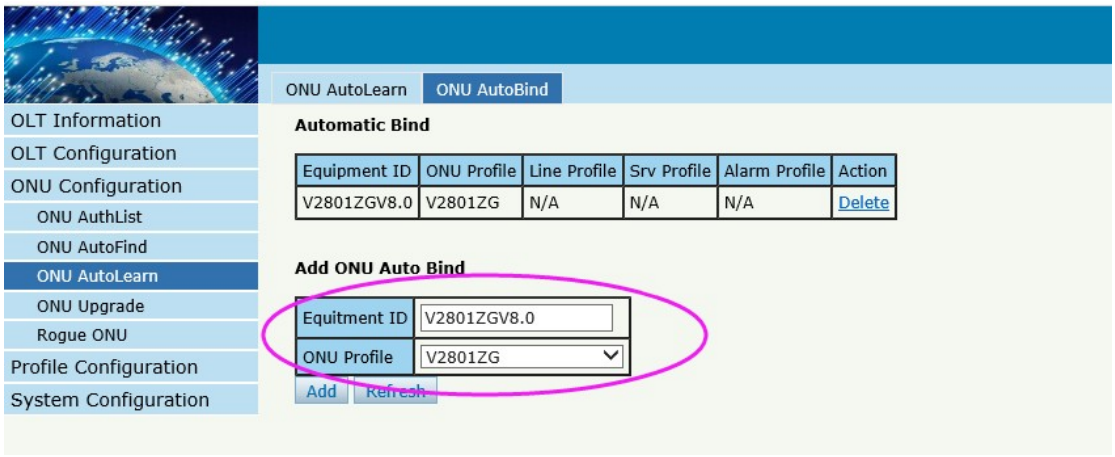
gpon-olt(config-pon-0/1)# onu auto-learn

**By Web ----------**

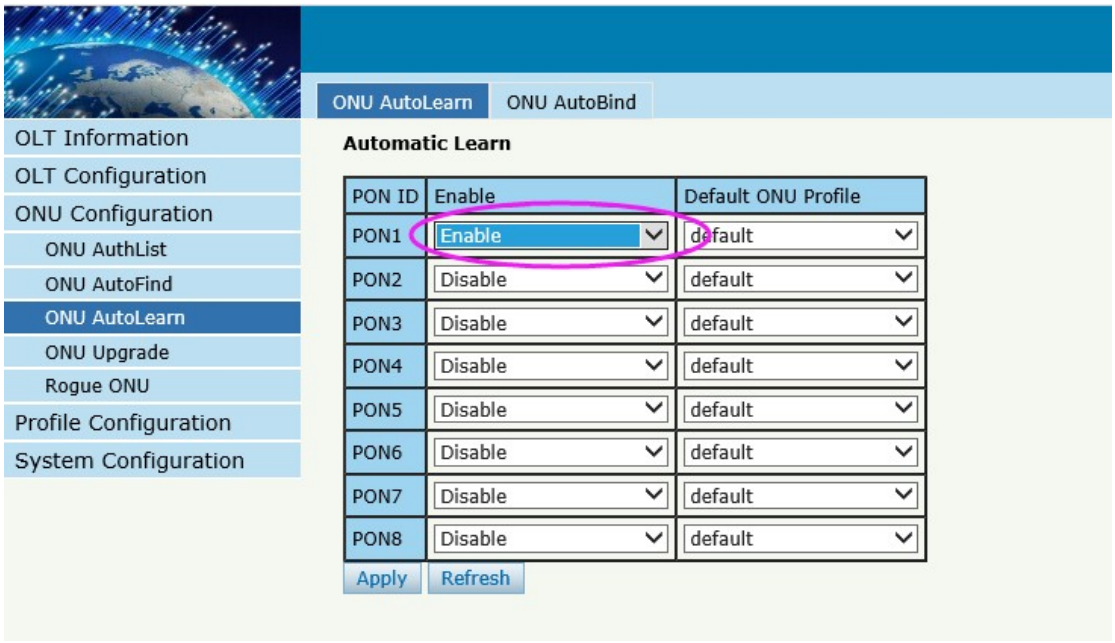
1、Create ONU profile for 1GE ONU



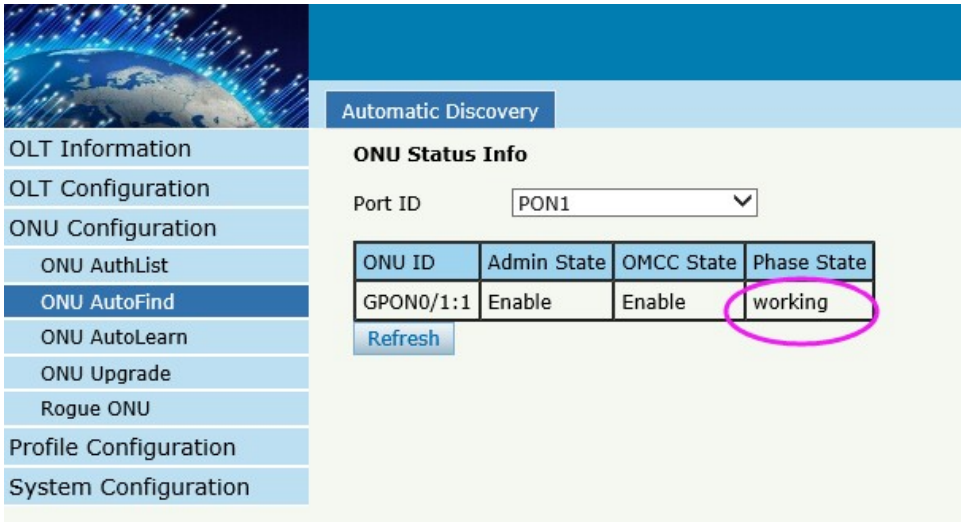

2, Equipment ID binding ONU profile




3, enable automatic learn mode of PON port




If ONU is successfully registered, working will be shown here




# HGU Authorization

## Planning Data

| Item | Description | Example |
|---|---|---|
| ONU Type | The type of onu | HG326RGW |
| ONU SN | ONU serial number | GPON000010E0 |
| OLT PON | The PON port of OLT | GPON 0/1 |
| Equipid | The Equipment id of ONU | IGD |

## ONU Manual authorize

**By CLI ----------**

gpon-olt(config)# profile onu name HG326RGW

gpon-olt(profile-onu:3)# port-num veip 1

gpon-olt(profile-onu:3)# commit

gpon-olt(profile-onu:3)# exit

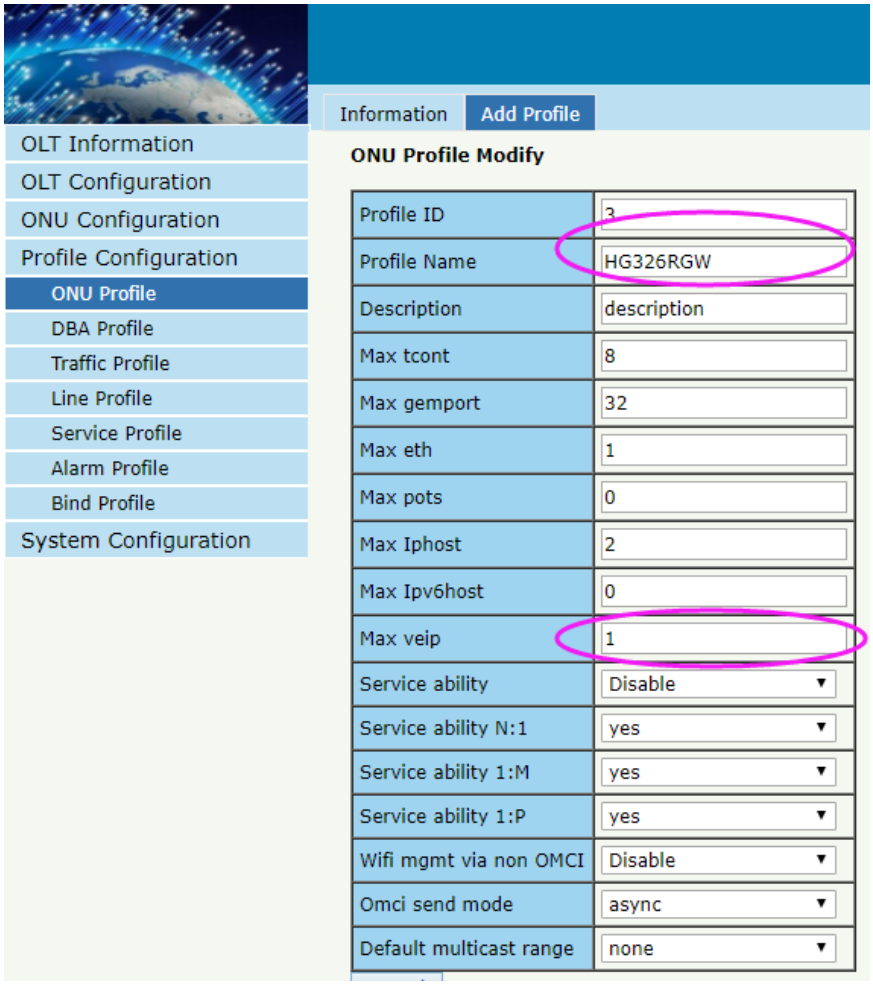
gpon-olt(config)# show onu auto-find

gpon-olt(config)# interface gpon 0/1

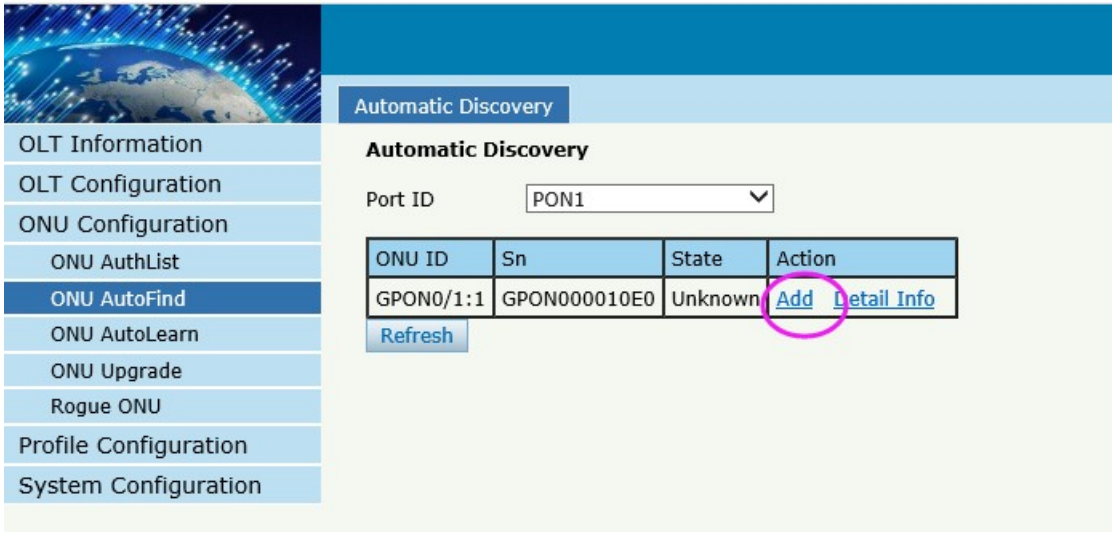
gpon-olt(config-pon-0/1)# onu add 1 profile HG326RGW sn GPON000010E0

**By Web ----------**

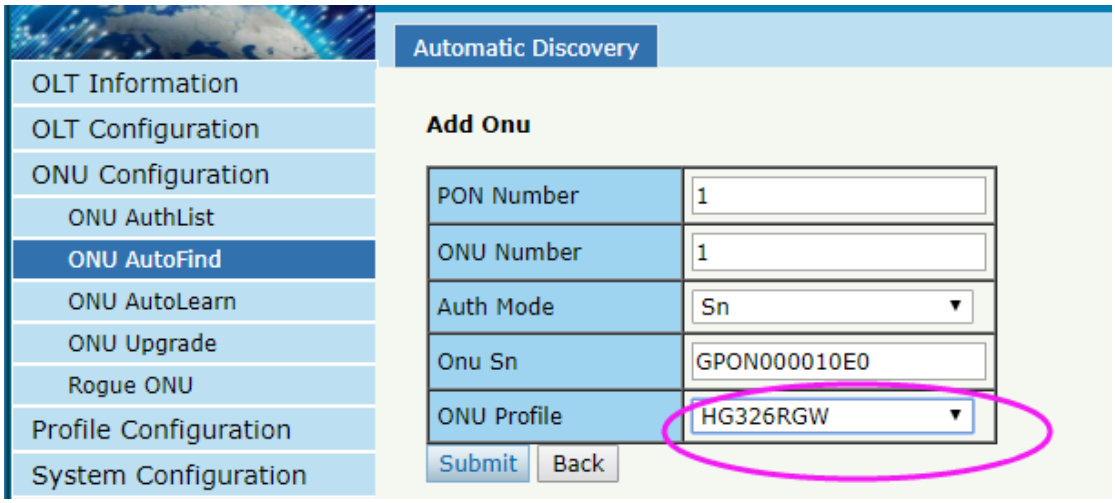
1、Create ONU profile for 4GE HGU



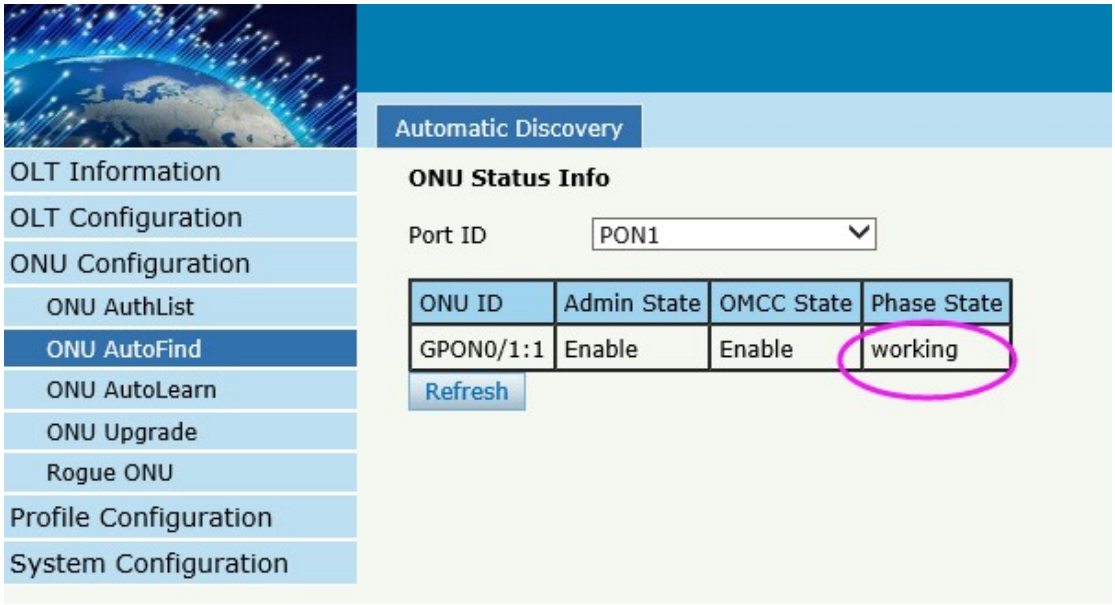

2, Find the ONU of Autofind lists and perform authorization operations on it




3, Select the ONU template




If ONU is successfully registered, working will be shown here




# ONU automatic authorize

**By CLI ----------**

gpon-olt(config)# profile onu name HG326RGW

gpon-olt(profile-onu:3)# port-num veip 1

gpon-olt(profile-onu:3)# commit

gpon-olt(profile-onu:3)# exit

gpon-olt(config)# show onu auto-find detail-info

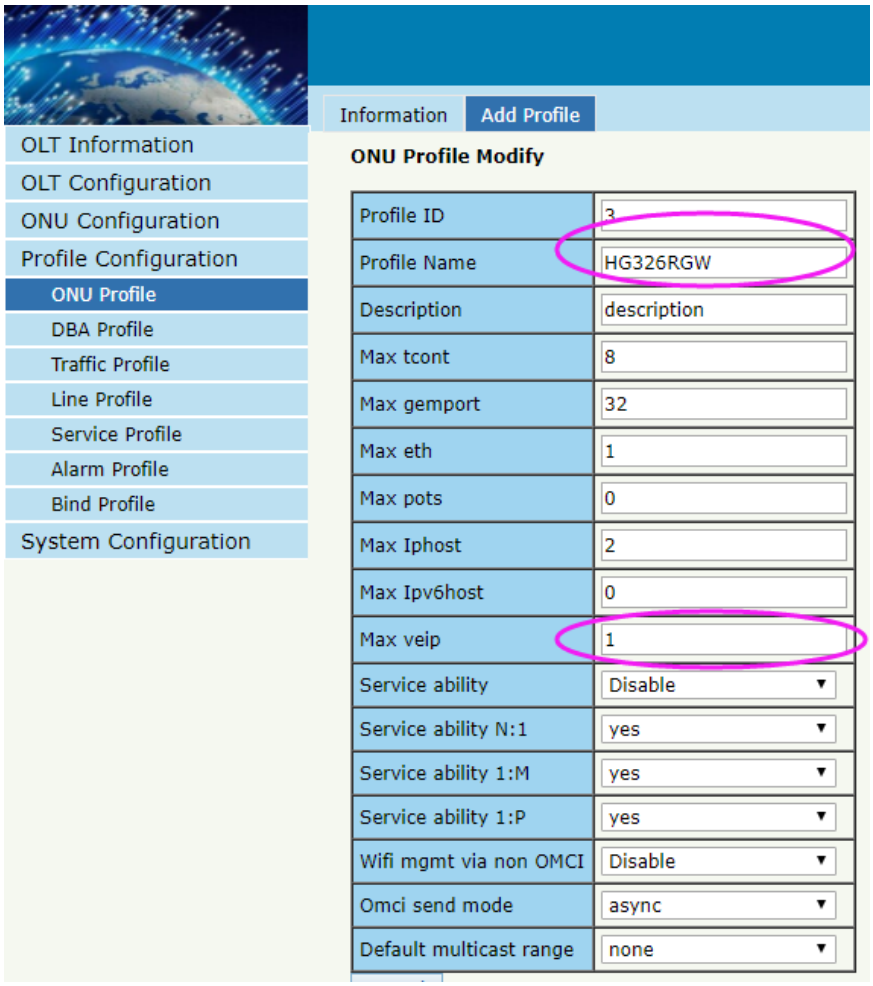
gpon-olt(config)# onu auto-learn bind onu-profile IGD HG326RGW

gpon-olt(config)# interface gpon 0/1

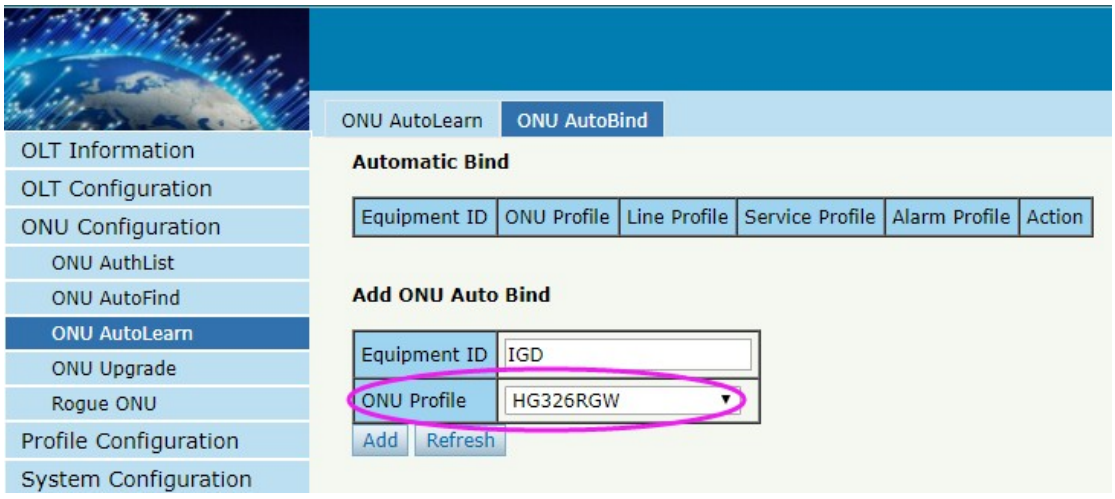
gpon-olt(config-pon-0/1)# onu auto-learn

**By Web ----------**

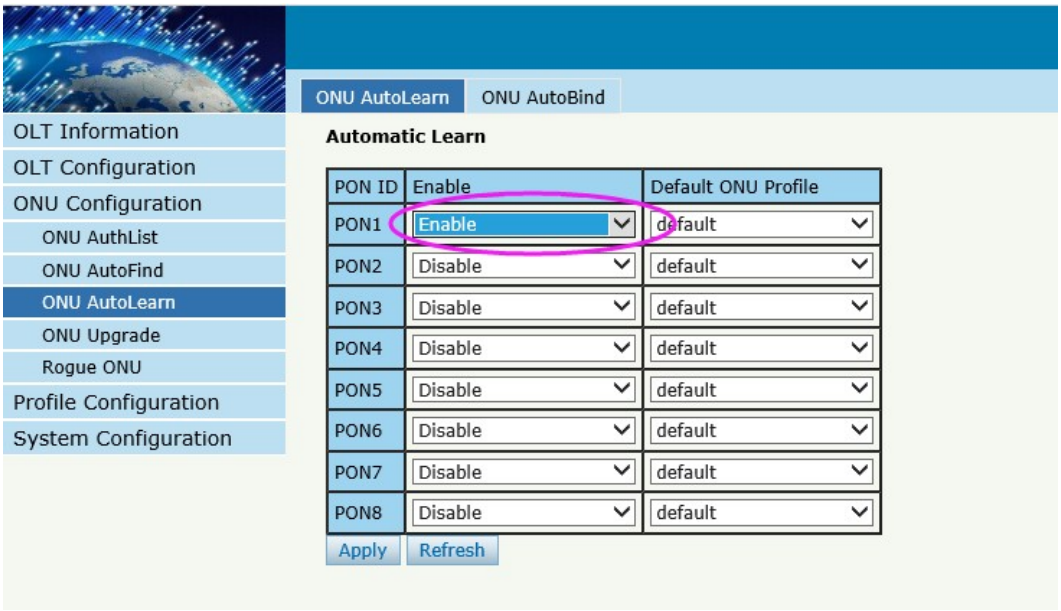
1、Create ONU profile for 4GE HGU



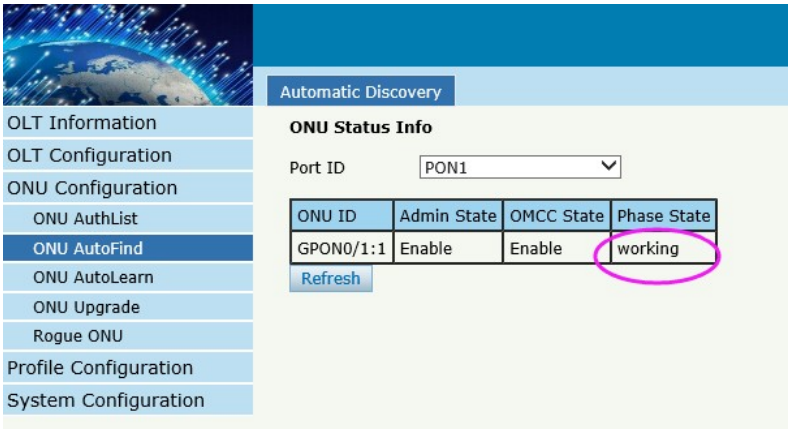

2, Equipment ID binding ONU profile




3, enable automatic learn mode




If ONU is successfully registered, working will be shown here




# Automatic Configure the ONU By Profile

Create a line profile and srv profile. When the ONU online, it can be bound the corresponding line profile and srvprofile according to the Equipment id.

## Planning Data

| Item | Description | Example |
|---|---|---|

| | | |
|---|---|---|
| ONU Type | The type of onu | 2801ZG |
| ONU SN | ONU serial number | GPON000000C0 |
| OLT PON | The PON port of OLT | GPON 0/1 |
| Equipment id | The Equipment id of ONU | V2801ZGV8.0 |
| Tcont | Tcont | 1 |
| Gemport | Gemport | 1 |
| Service | The onu Service | Vlan 100 |
| Service-port | The onu service-port | Vlan 100<br>Mode tag |

# Automatic configure onu

**By CLI ----------**

gpon-olt(config)# profile onu name V2801ZG

gpon-olt(profile-onu:3)# port-num eth 1

gpon-olt(profile-onu:3)# commit

gpon-olt(profile-onu:3)# exit

gpon-olt(config)# profile dba name dba_1

gpon-olt(profile-dba:4)# type 3 assured 10000 maximum 100000

gpon-olt(profile-dba:4)# exit

gpon-olt(profile-dba:4)# commit

gpon-olt(config)# profile line name line1

gpon-olt(profile-line:1)# tcont 1 dba dba_1

gpon-olt(profile-line:1)# gemport 1 tcont 1

gpon-olt(profile-line:1)# service 1 gemport 1 vlan 100

gpon-olt(profile-line:1)# service-port 1 gemport 1 uservlan 100 vlan 100

gpon-olt(profile-line:1)# commit

gpon-olt(profile-line:1)# exit

pon-olt(config)# profile srv name srv1

gpon-olt(profile-srv:1)# portvlan eth 1 mode hybrid def_vlan 100

gpon-olt(profile-srv:1)# commit

gpon-olt(profile-srv:1)# exit

gpon-olt(config)# onu auto-learn bind onu-profile V2801ZG8.0 V2801ZG

gpon-olt(config)# onu auto-learn bind line-profile V2801ZGV8.0 line1

gpon-olt(config)# onu auto-learn bind srv-profile V2801ZGV8.0 srv1

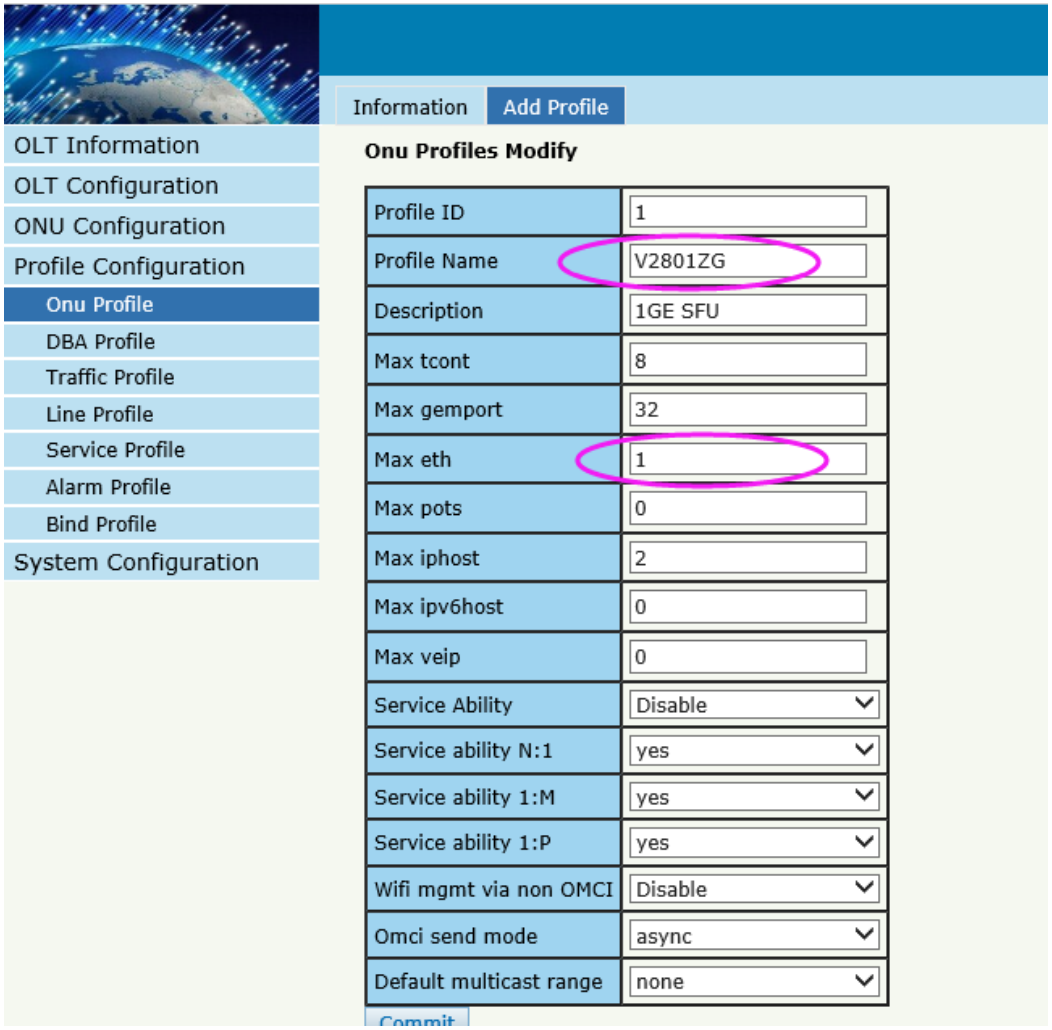
gpon-olt(config)# interface gpon 0/1

gpon-olt(config-pon-0/1)# onu auto-learn

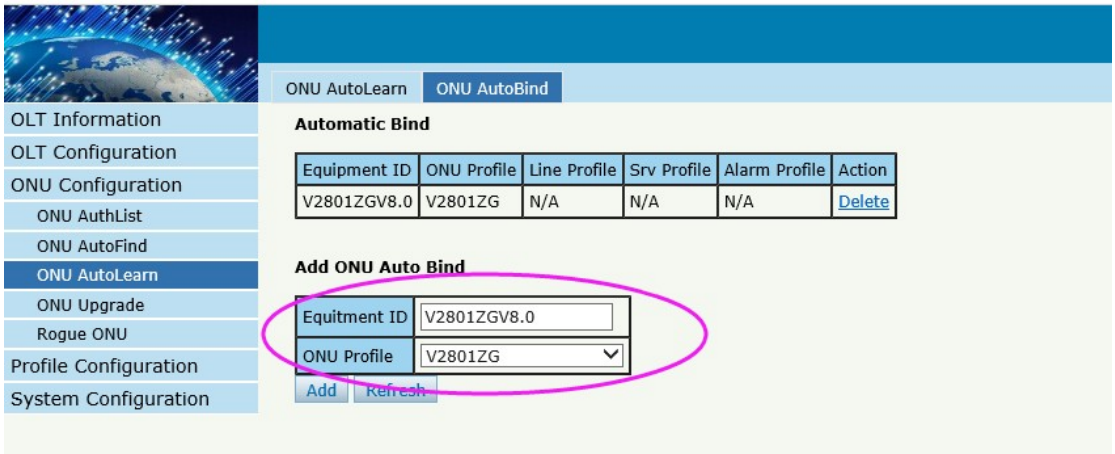
gpon-olt(config-pon-0/1)#exit

**By Web ----------**

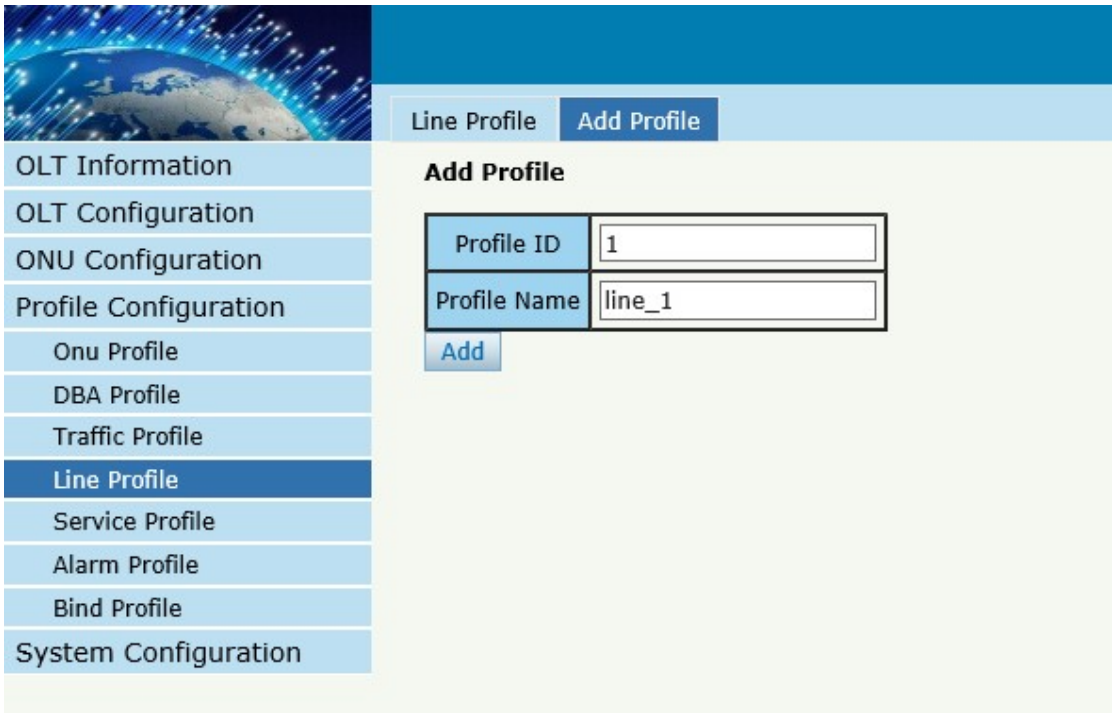
1、Create ONU profile for 1GE ONU

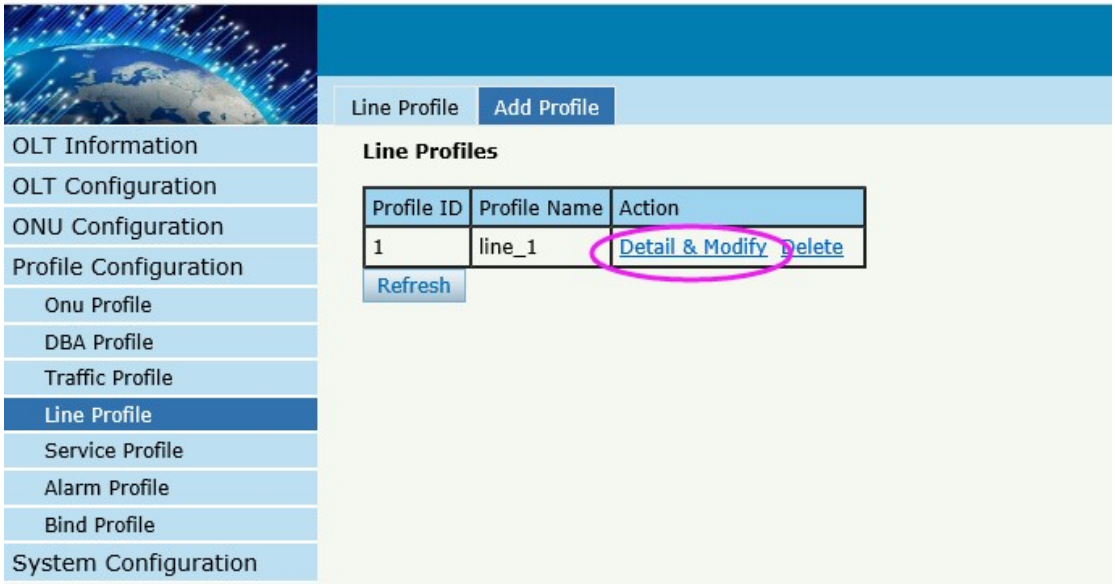



2, Equipment ID bind ONU profile

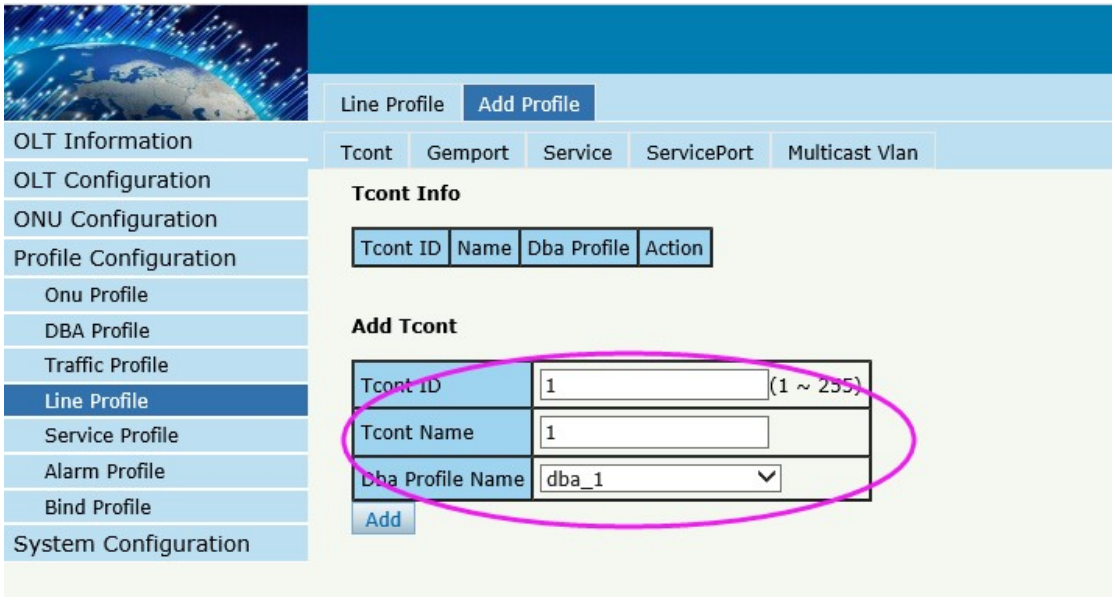



3, create line profile

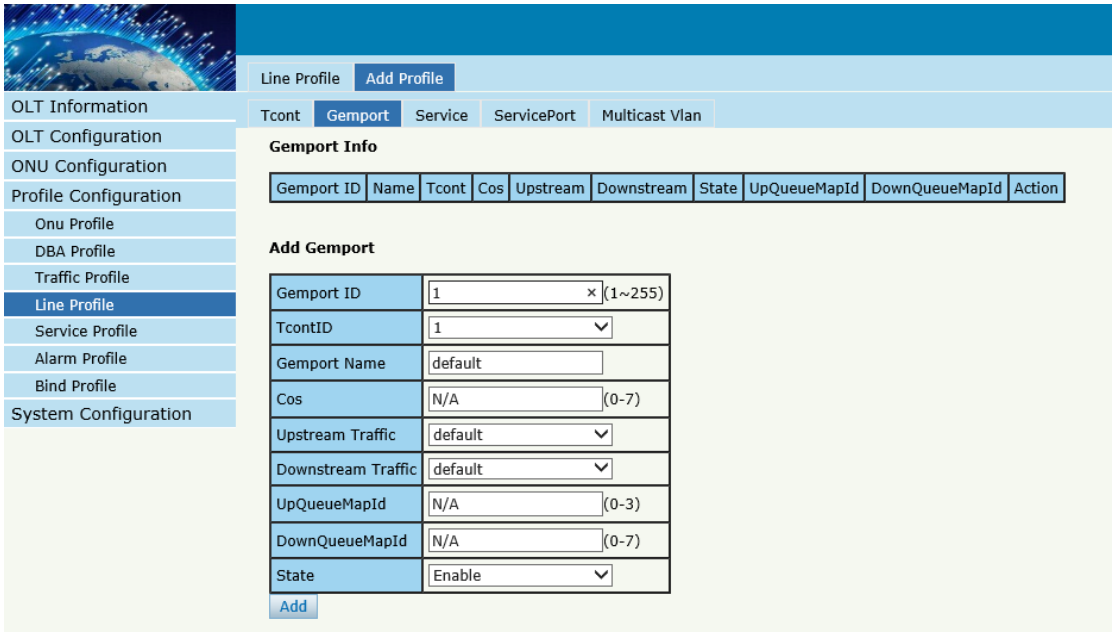


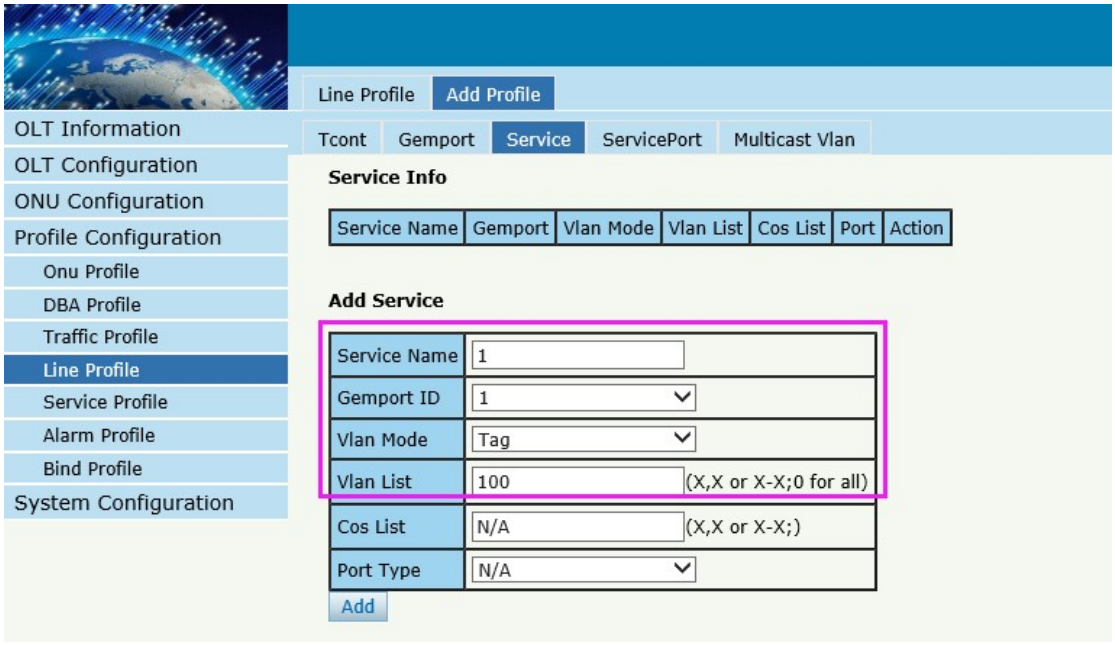

4, create tcont



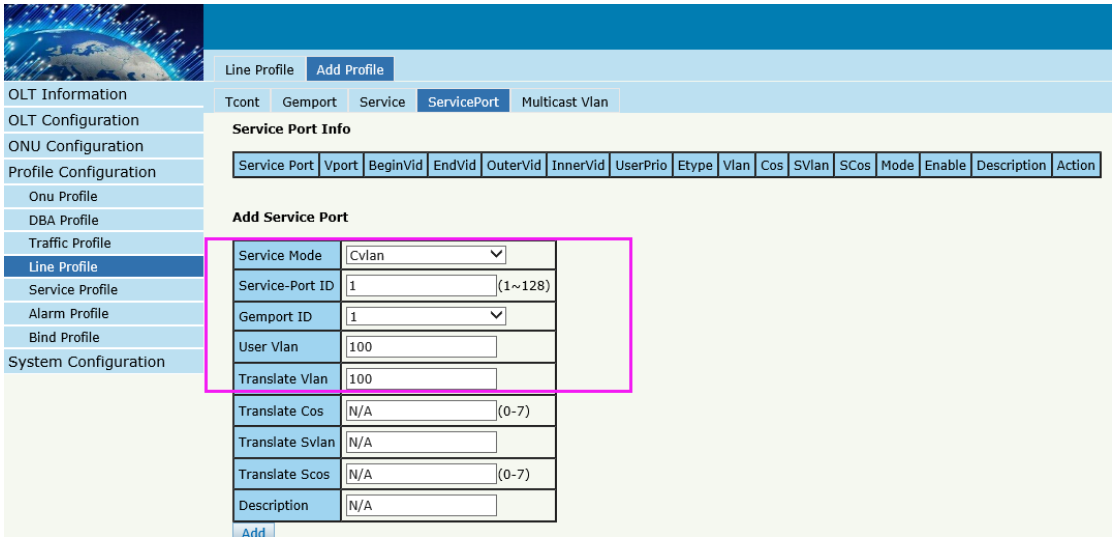

5, create gemport



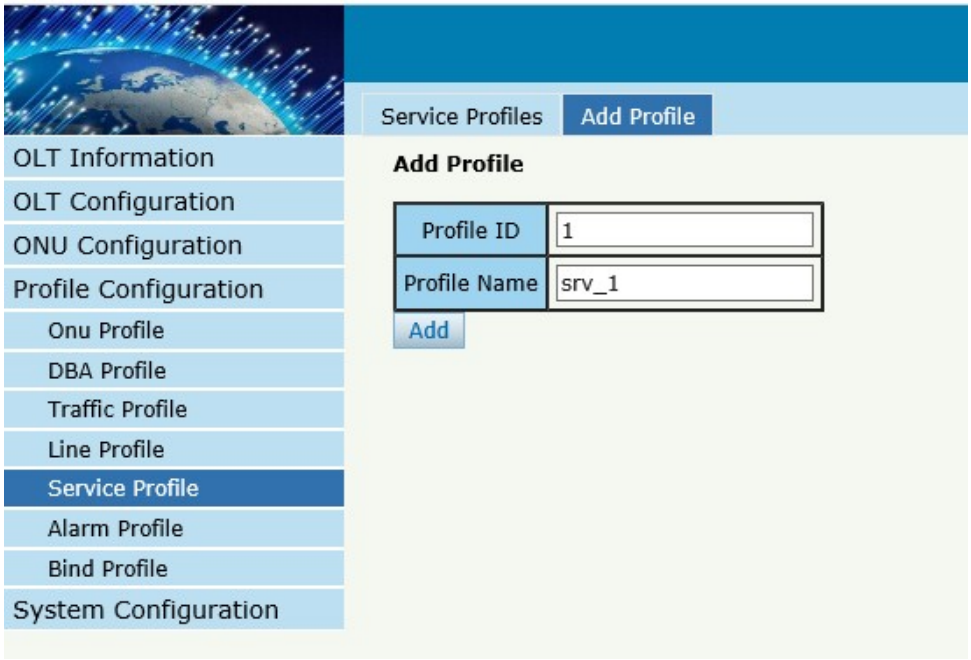

6 create service

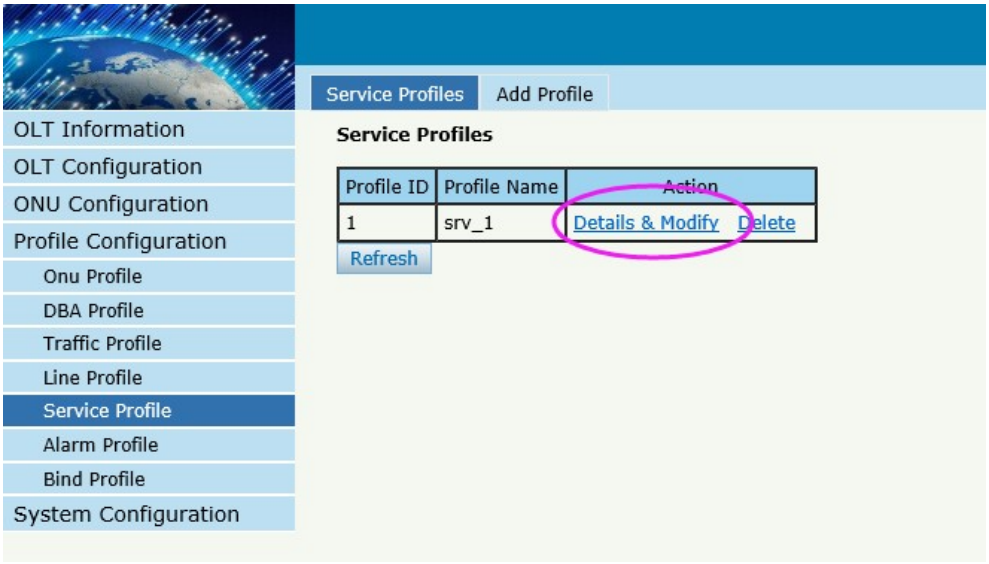



7、create service-port

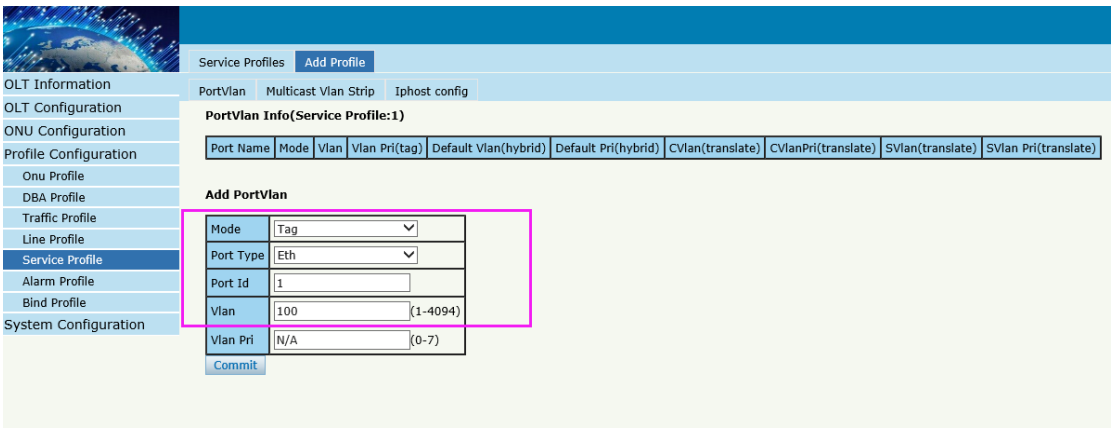


8、create service profile

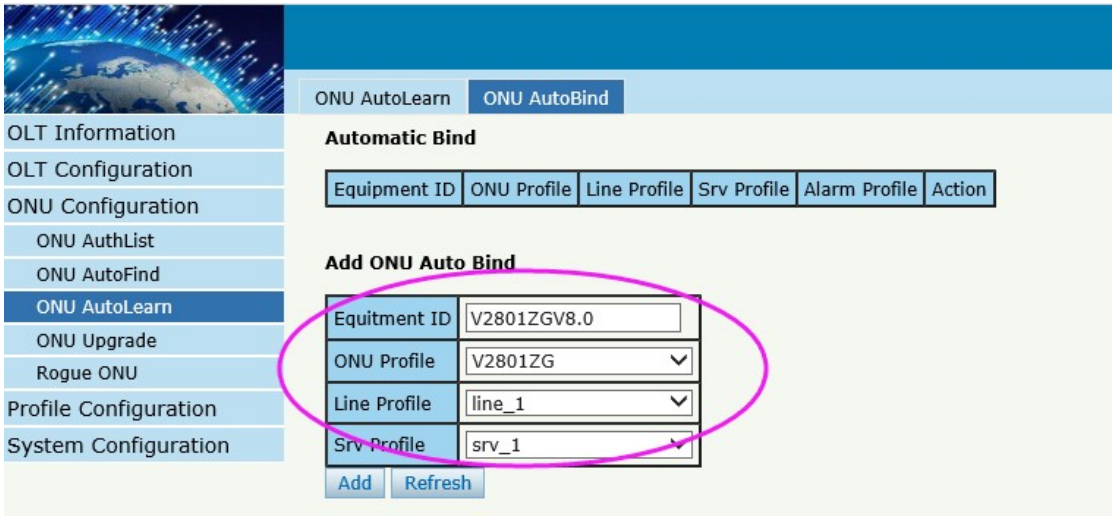


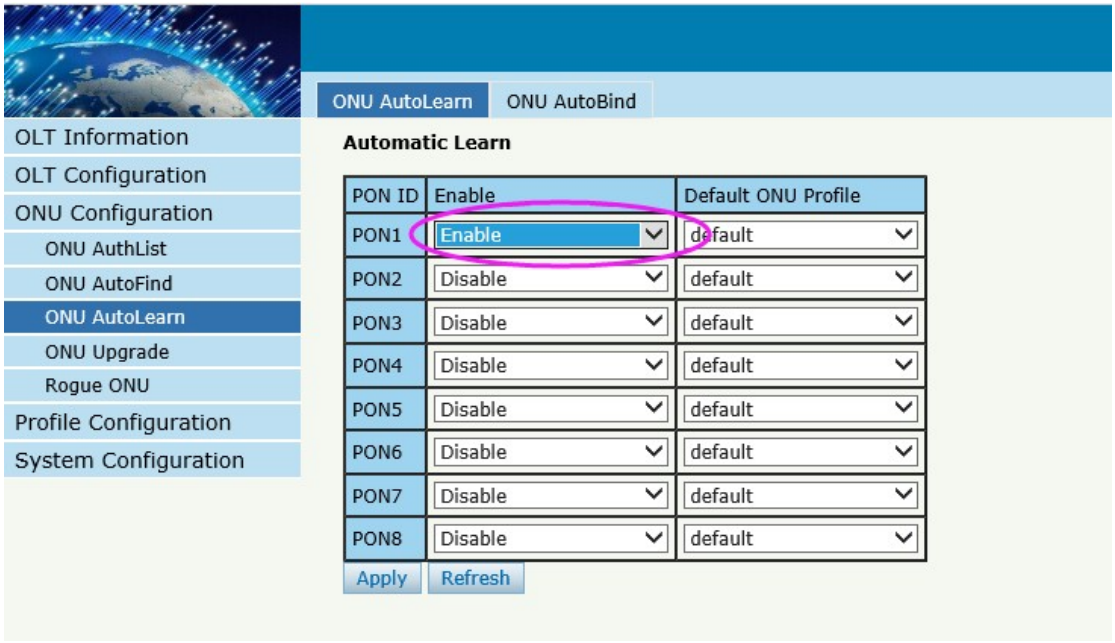

9、create service profile




10、bind profile




11, enable automatic learn mode




# Show/Delete the ONU

## Show the ONU status

**By CLI** ----------

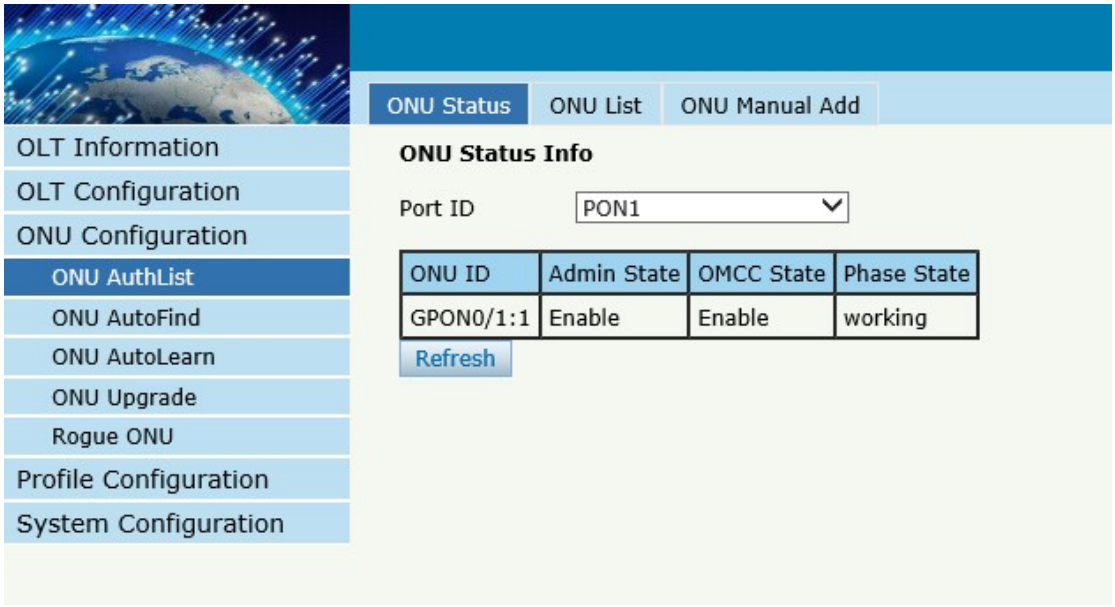
gpon-olt(config-pon-0/1)# show onu state

OnuIndex Admin State OMCC State Phase State Config State Channel

---

1/1/1:1 enable enable working succeeded 1(GPON)

**By Web ----------**

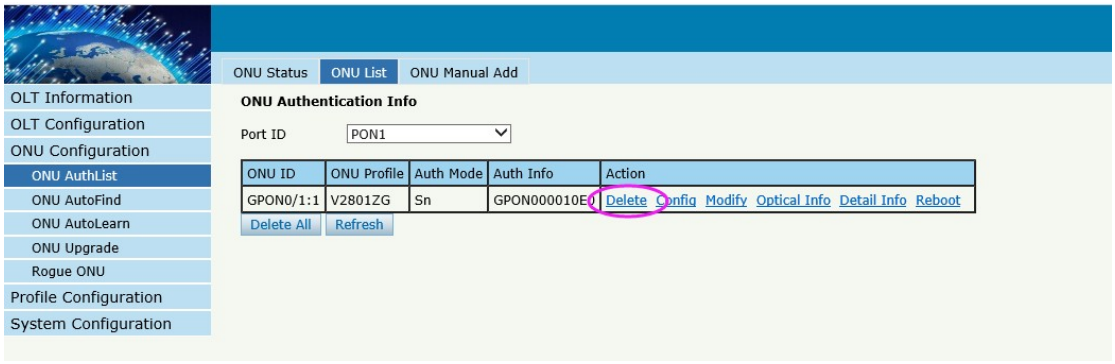



# Delete the ONU status

**By CLI ----------**

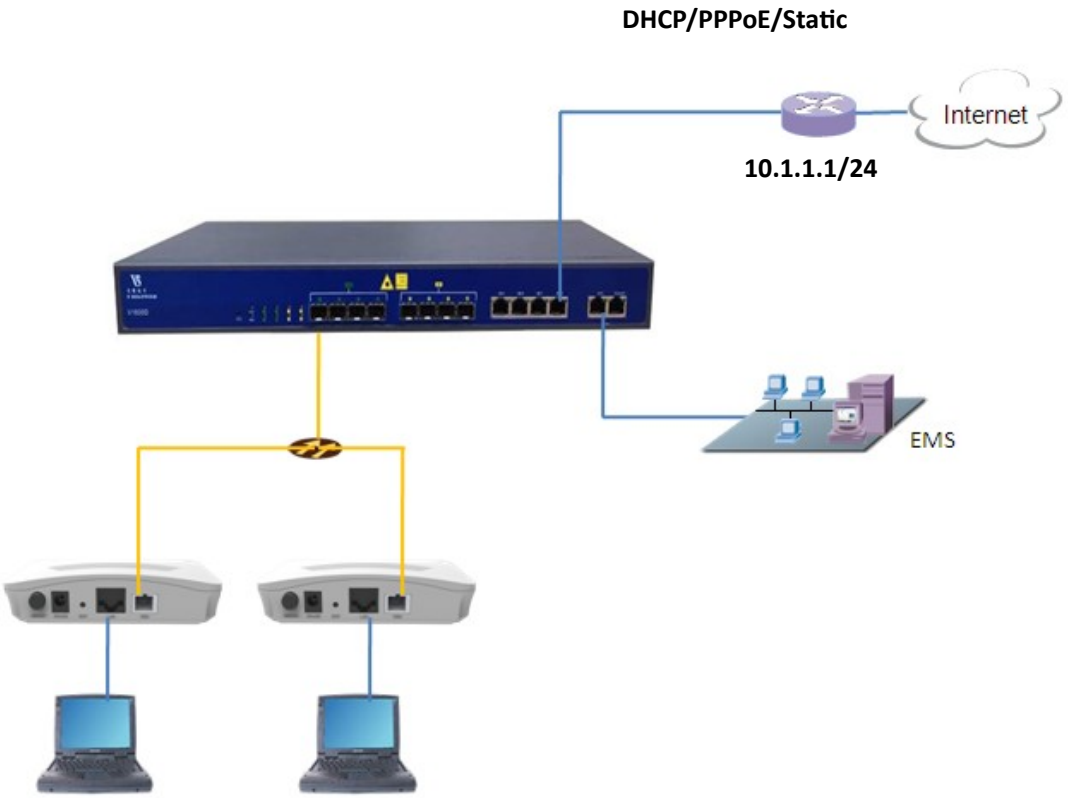
gpon-olt(config-pon-0/1)# no onu 1

**By Web ----------**


ONU Status
ONU List
ONU Manual Add
OLT Information
OLT Configuration
ONU Configuration
ONU AuthList
ONU AutoFind
ONU AutoLearn
ONU Upgrade
Rogue ONU
Profile Configuration
System Configuration
ONU Authentication Info
Port ID
PON1
ONU ID
ONU Profile
Auth Mode
Auth Info
Action
GPON0/1:1
V2801ZG
Sn
GPON000010E0
Delete
Config
Modify
Optical Info
Detail Info
Reboot
Delete All
Refresh

# Case 1 SFU Bridge

## Network Diagram




## Planning Data

| Item | | Description | Example |
|---|---|---|---|
| ONU Information | Slot No. | The number of the slot actually used. | 0 |
| | PON No. | The number of the actually used PON port. | 1 |

| | | | |
|---|---|---|---|
| | ONU Auth No. | Configure according to the network planning of the operator. | 1 |
| | ONU Type | The type of the ONU. | 2801ZG |
| | ONU SN | ONU serial number | GPON000000C0 |
| | OLT PON | The PON port of OLT | GPON 0/1 |
| | Equipid | The Equipment id of ONU | V2801ZGV8.0 |
| OLT | Service Uplink VLAN | The VLAN ID of the uplink port service. | VLAN mode = UNTAG<br>PVID = 100 |
| | Service Uplink port | Configure according to the number of the actually<br>used uplink port. | GE8 |
| ONU | Service LAN port | The number of the actually used ONU port. | LAN1 |
| | Tcont | The onu Tcont | Tcont=1 |
| | Gemport | The onu Gemport | Gemport=1 |
| | Dba | The ONU dba profile | Dba name= dba_1<br>Dba type = 3 |
| | Service vlan | The vlan of ONU service. | Service Vlan = 100 |
| | Service-port uservlan | The vlan of onu service-port | Service-port vlan =100 |
| | Portvlan | The vlan of onu port | Portvlan=100<br>Mode=hybrid |
| | If DHCP mode | The router use DHCP assign ip to PC. | Gateway = 10.1.1.1<br>IP Range 10.1.1.2-10.1.1.254<br>IP Mask = 255.255.255.0<br>DNS = 8.8.8.8 |
| PC | If PPPoE mode | The router use PPPoE assign ip to PC. | IP Range 10.1.1.2-10.1.1.254<br>IP Mask = 255.255.255.0<br>User name = test<br>Password = test |
| | If Static mode | The router use Static assign ip to PC. | Gateway = 10.1.1.1<br>IP = 10.1.1.100<br>IP Mask = 255.255.255.0<br>DNS = 8.8.8.8 |

# Configuring the OLT

**By CLI ----------**

gpon-olt(config)# vlan 100

gpon-olt(config-vlan-100)# exit

gpon-olt(config)# interface gigabitethernet 0/8

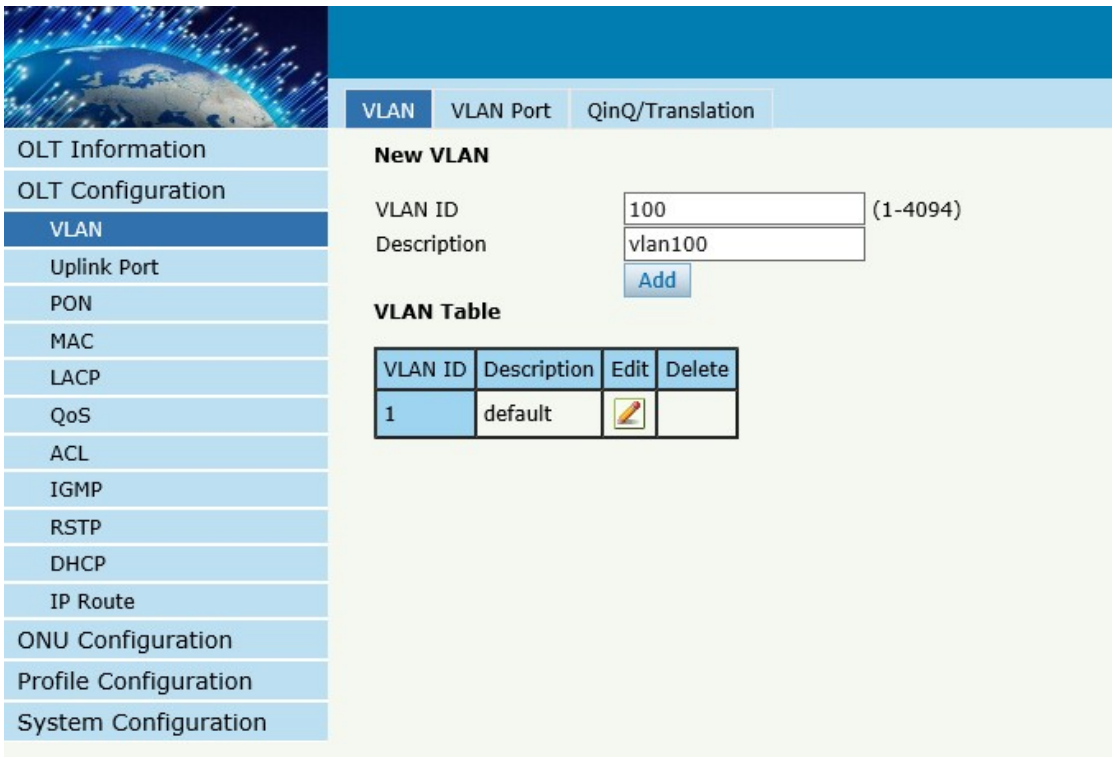
gpon-olt(config-if-ge0/8)# switchport hybrid vlan 100 untagged

gpon-olt(config-if-ge0/8)# switchport hybrid pvid vlan 100

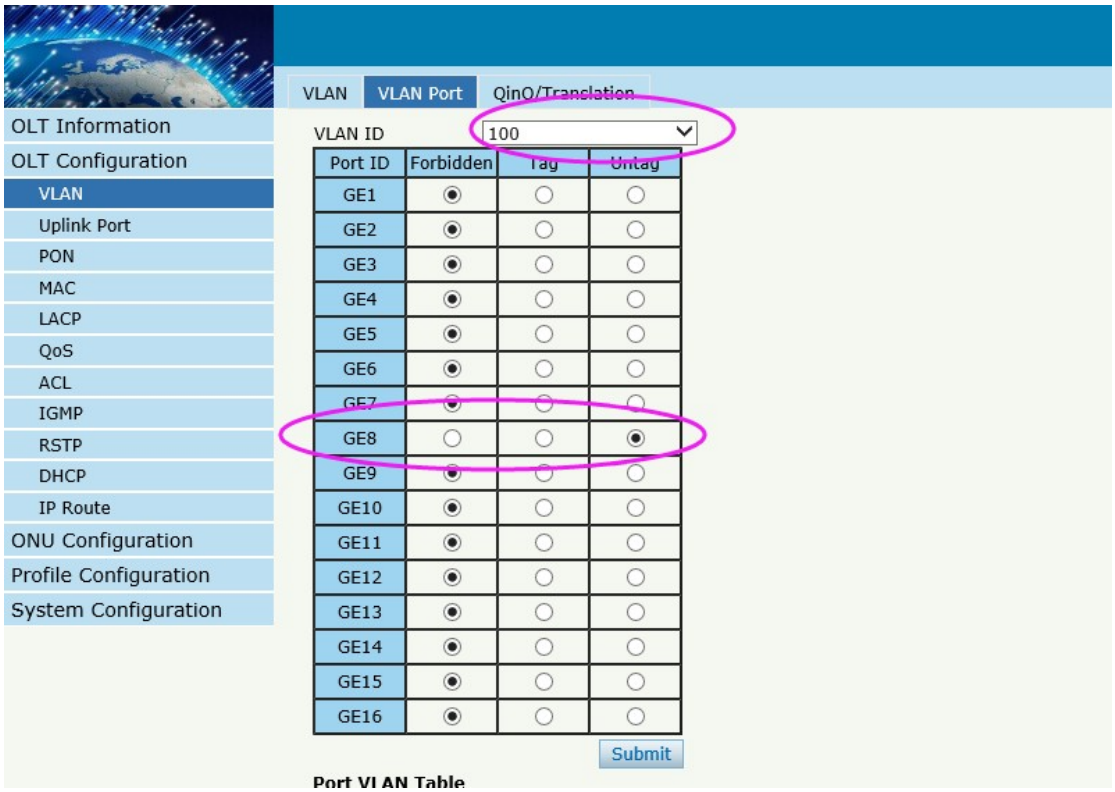
gpon-olt(config-if-ge0/8)# exit

**By Web ----------**

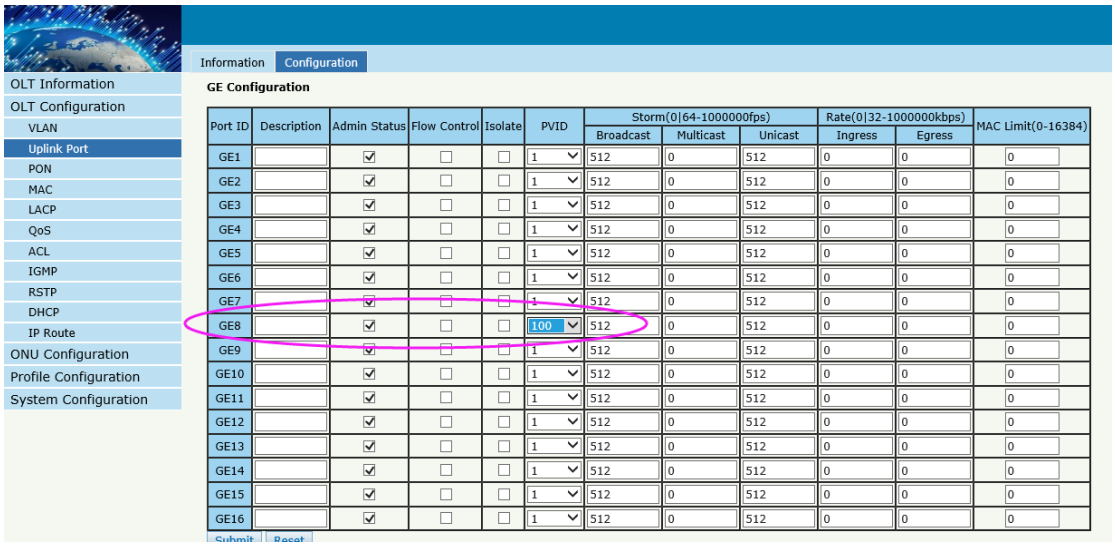
1, Create a new VLAN




2. Configure GE port VLAN mode




3, Configure GE port PVID




# Configuring the ONU

**By CLI ----------**

gpon-olt(config)#profile dba name dba_1

gpon-olt(profile-dba:1)# type 3 assured 10000 maximum 1000000

gpon-olt(profile-dba:1)# commit

gpon-olt(profile-dba:1)# exit

gpon-olt(config)# interface gpon  0/1

gpon-olt(config-pon-0/1)# onu 1 tcont 1 dba dba_1

gpon-olt(config-pon-0/1)# onu 1 gemport 1 tcont 1

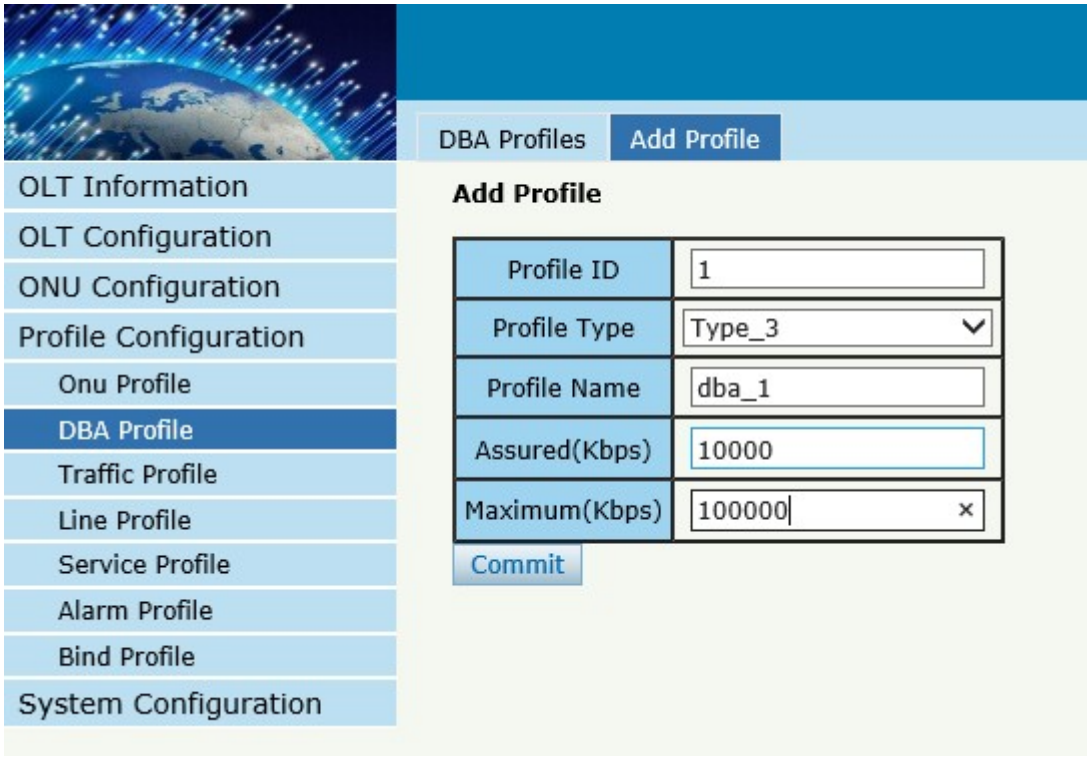
gpon-olt(config-pon-0/1)# onu 1 service 1 gemport 1 vlan 100

gpon-olt(config-pon-0/1)#onu 1 service-port 1 gemport 1 uservlan 100 vlan 100

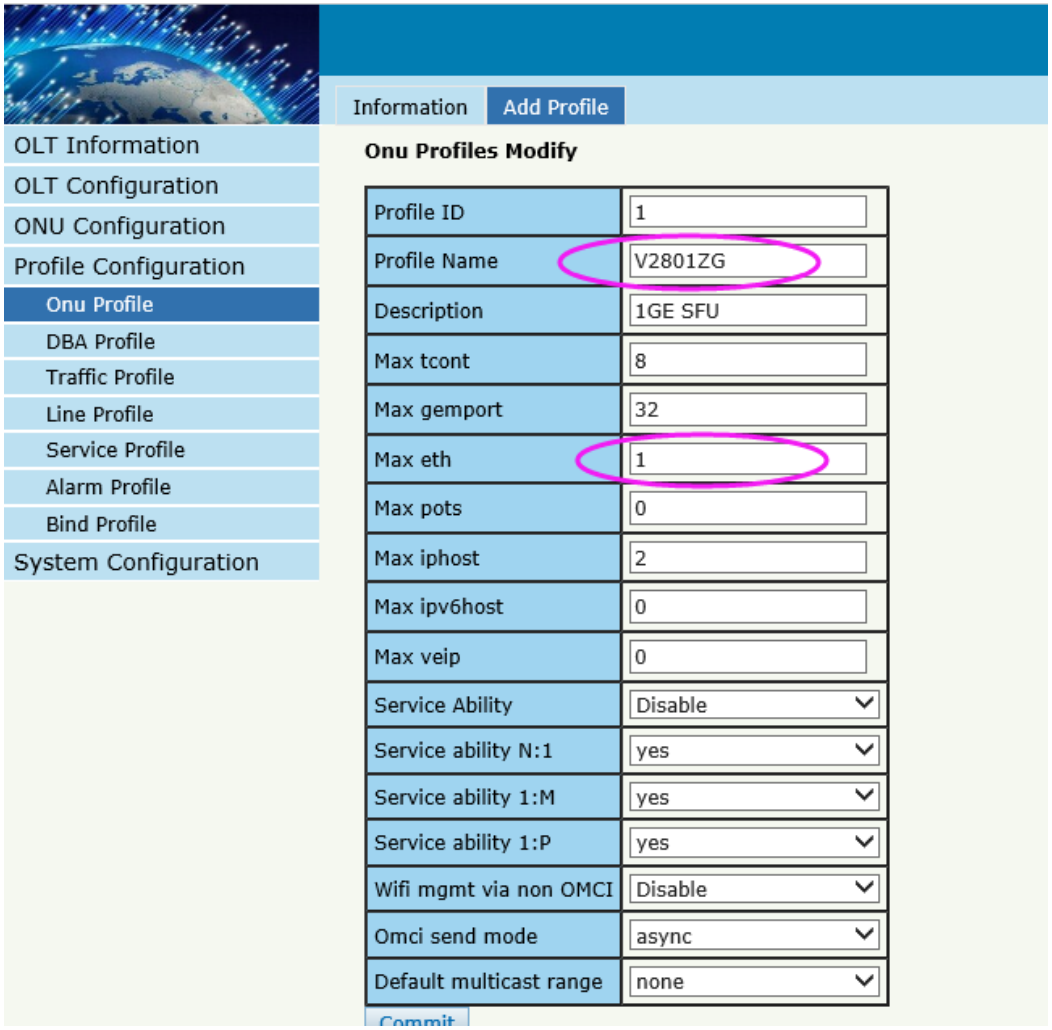
gpon-olt(config-pon-0/1)#onu 1 portvlan eth 1 mode hybrid def_vlan 100

**By Web ----------**

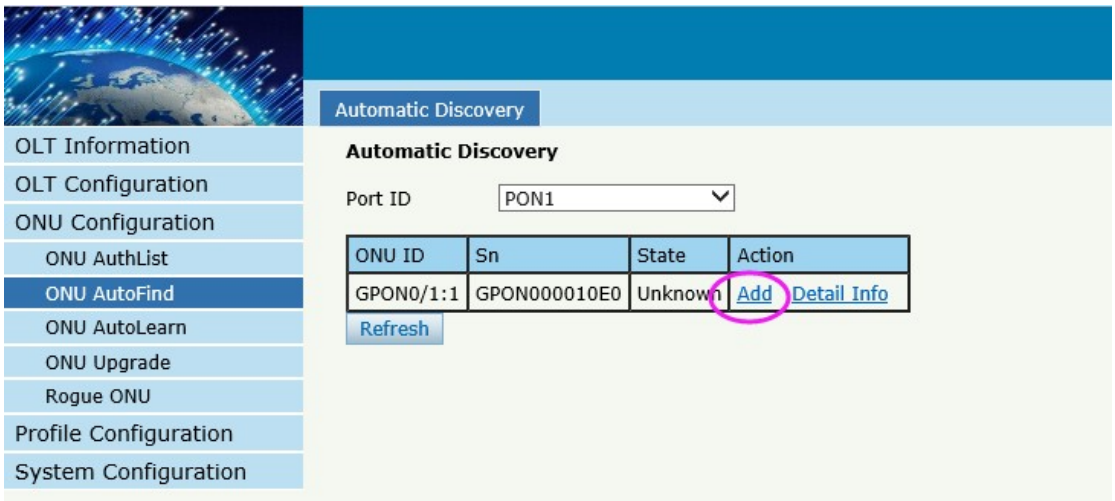
1, create DBA profile

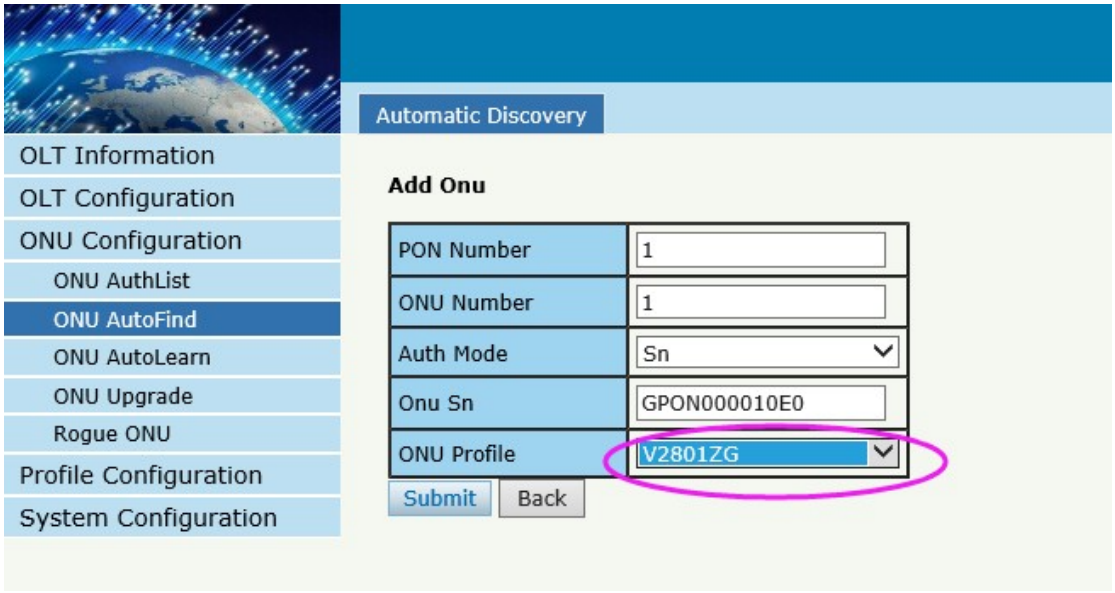



2,Create ONU profile for 1GE ONU

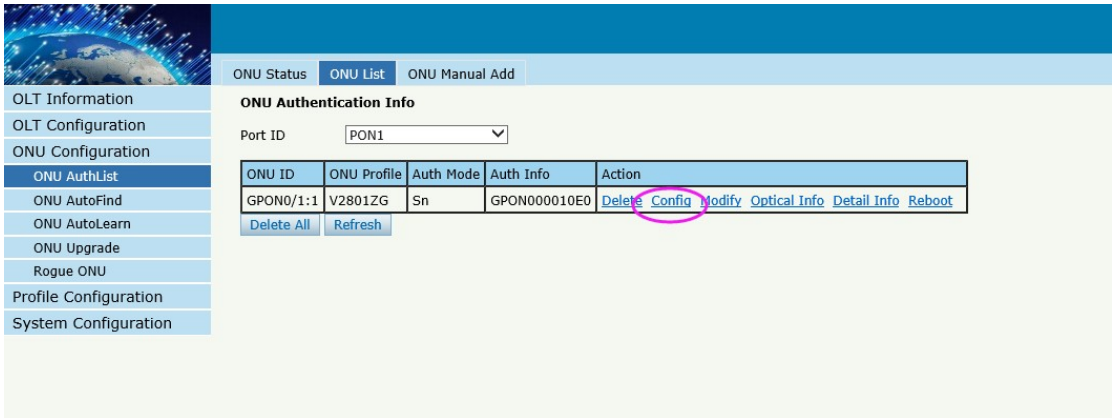


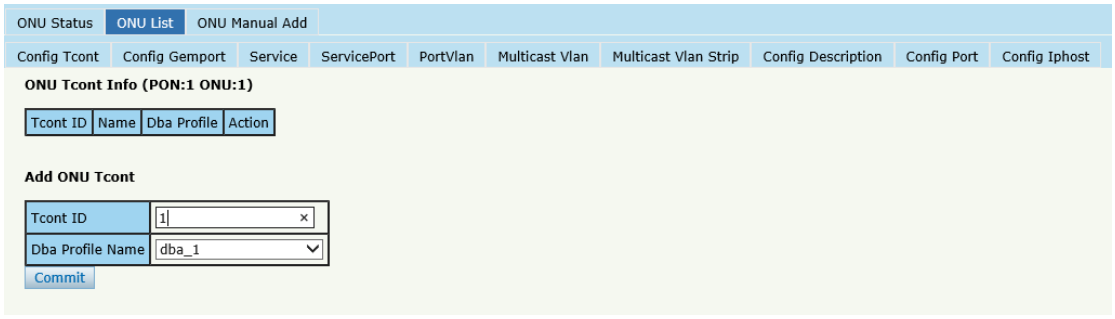

3,Authorize ONU

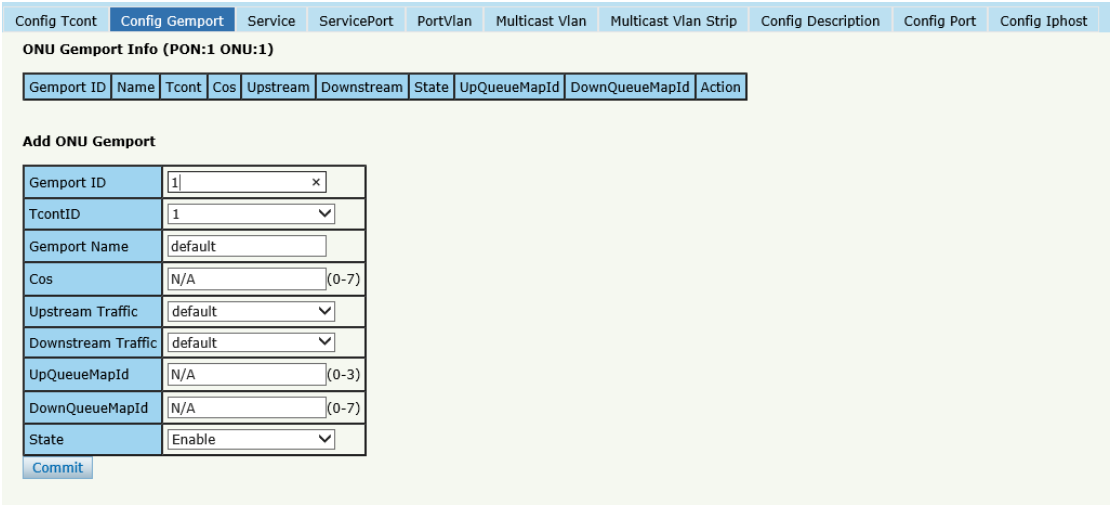


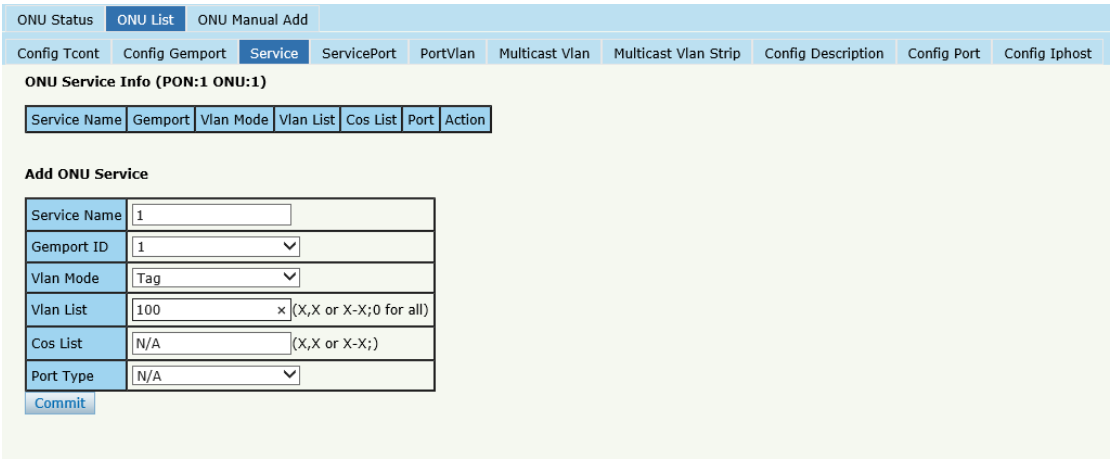


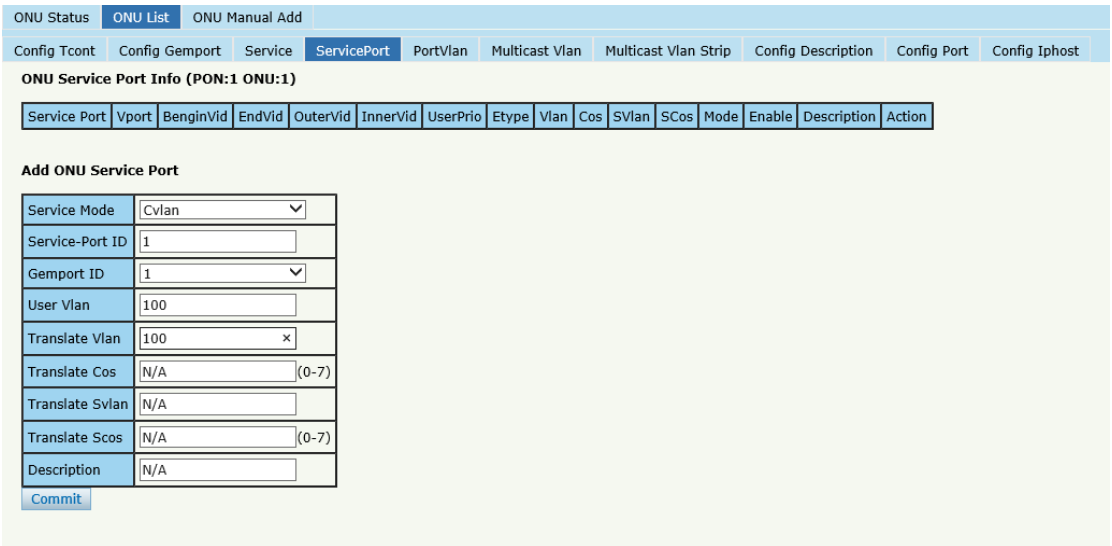

4, Configure ONU

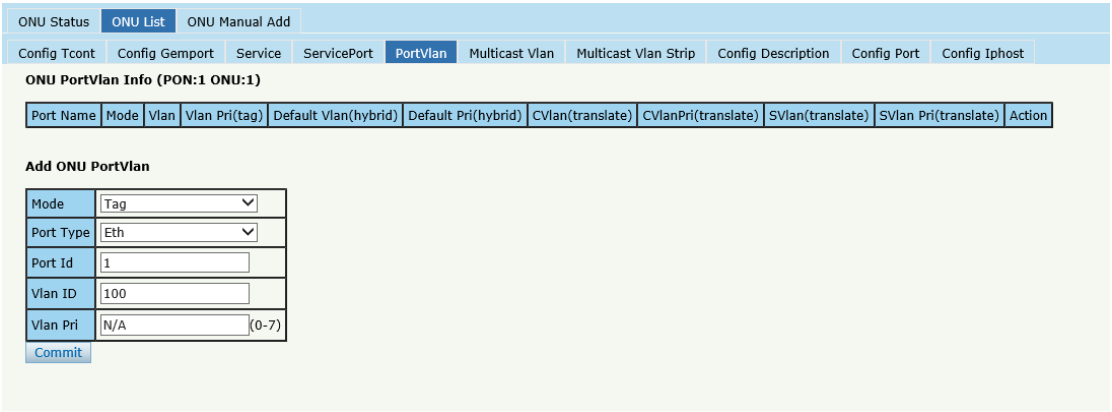



Config Tcont
Config Gemport
Service
ServicePort
PortVlan
Multicast Vlan
Multicast Vlan Strip
Config Description
Config Port
Config Iphost
ONU Gemport Info (PON:1 ONU:1)
Gemport ID
Name
Tcont
Cos
Upstream
Downstream
State
UpQueueMapId
DownQueueMapId
Action
Add ONU Gemport
Gemport ID
1
TcontID
1
Gemport Name
default
Cos
N/A
(0-7)
Upstream Traffic
default
Downstream Traffic
default
UpQueueMapId
N/A
(0-3)
DownQueueMapId
N/A
(0-7)
State
Enable
Commit


ONU Status
ONU List
ONU Manual Add
Config Tcont
Config Gemport
Service
ServicePort
PortVlan
Multicast Vlan
Multicast Vlan Strip
Config Description
Config Port
Config Iphost
ONU Service Info (PON:1 ONU:1)
Service Name
Gemport
Vlan Mode
Vlan List
Cos List
Port
Action
Add ONU Service
Service Name
1
Gemport ID
1
Vlan Mode
Tag
Vlan List
100
(X,X or X-X;0 for all)
Cos List
N/A
(X,X or X-X;)
Port Type
N/A
Commit


ONU Status
ONU List
ONU Manual Add
Config Tcont
Config Gemport
Service
ServicePort
PortVlan
Multicast Vlan
Multicast Vlan Strip
Config Description
Config Port
Config Iphost
ONU Service Port Info (PON:1 ONU:1)
Service Port
Vport
BenginVid
EndVid
OuterVid
InnerVid
UserPrio
Etype
Vlan
Cos
SVlan
SCos
Mode
Enable
Description
Action
Add ONU Service Port
Service Mode
Cvlan
Service-Port ID
1
Gemport ID
1
User Vlan
100
Translate Vlan
100
Translate Cos
N/A
(0-7)
Translate Svlan
N/A
Translate Scos
N/A
(0-7)
Description
N/A
Commit




# Case 2 SFU Bridge With IPTV

## Network Diagram

# Planning Data

| Item | | Description | Example |
|---|---|---|---|
| ONU Information | Slot No. | The number of the slot actually used. | 0 |
| | PON No. | The number of the actually used PON port. | 1 |
| | ONU Auth No. | Configure according to the network planning of the operator. | 1 |
| | ONU Type | The type of the ONU. | 2801ZG |
| | ONU SN | ONU serial number | GPON000000C0 |
| | OLT PON | The PON port of OLT | GPON 0/1 |
| | Equipid | The Equipment id of ONU | V2801ZGV8.0 |
| | Service PON port | Configure according to the number of the actually used PON port. | PON1 |
| ONU | Service LAN port | The number of the actually used ONU port. | LAN1 |
| | Tcont | The onu Tcont | Tcont=1 |
| | Gemport | The onu Gemport | Gemport=1 |
| | Dba | The ONU dba profile | Dba name=dba_1<br>Dba type = 3 |
| | Service vlan | The vlan of ONU service. | Service Vlan = 300 |
| | Service-port uservlan | The vlan of onu service-port | Service-port vlan =300 |
| | Portvlan | The vlan of onu port | Portvlan=300<br>Mode=hybrid |
| IGMP | IGMP Group | The IP of IGMP source | IP = 239.0.0.1 |

# Configuring the OLT

CLI

gpon-olt(config)# vlan 300

gpon-olt(config-vlan-300)# exit

gpon-olt(config)# interface gigabitethernet 0/7

gpon-olt(config-if-ge0/7)# switchport hybrid vlan 300 untagged

gpon-olt(config-if-ge0/7)# switchport hybrid pvid vlan 300

gpon-olt(config-if-ge0/7)# exit

gpon-olt(config)# ip igmp snooping enable

gpon-olt(config)# ip igmp snooping general-query-packet enable

gpon-olt(config)# ip igmp snooping mrouter vlan 300 interface gigabitethernet 0/7

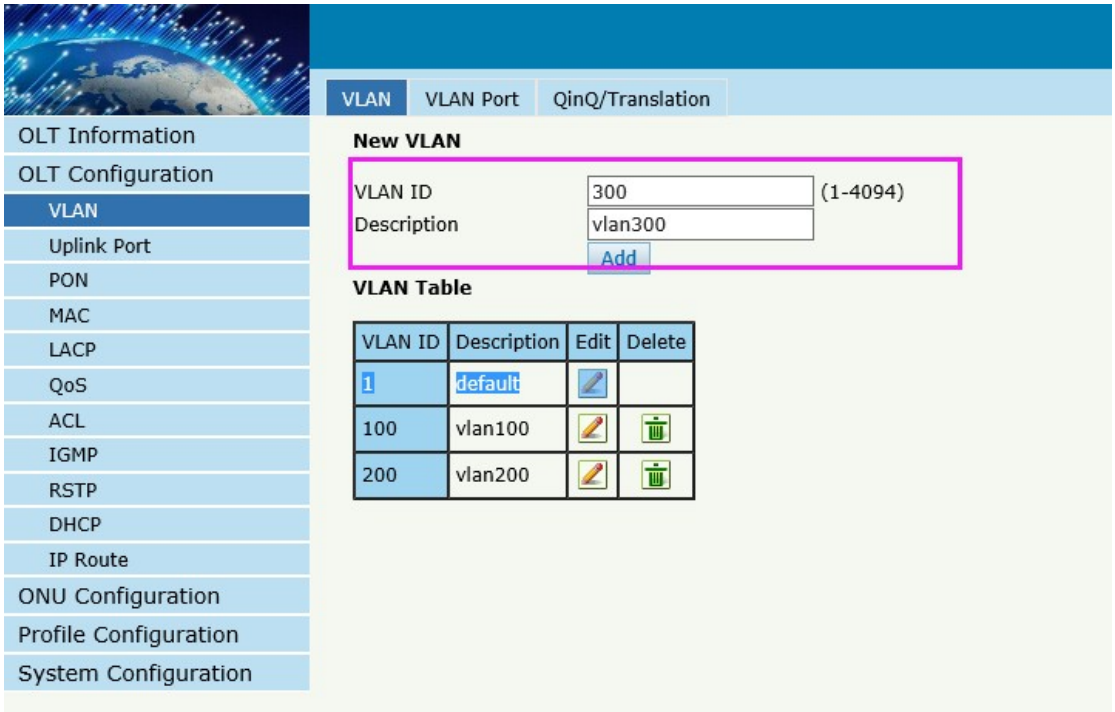
gpon-olt(config)#ip igmp snooping mvlan 300 unknown-multicast drop igmp trap-to-cpu

gpon-olt(config)# interface gpon 0/1

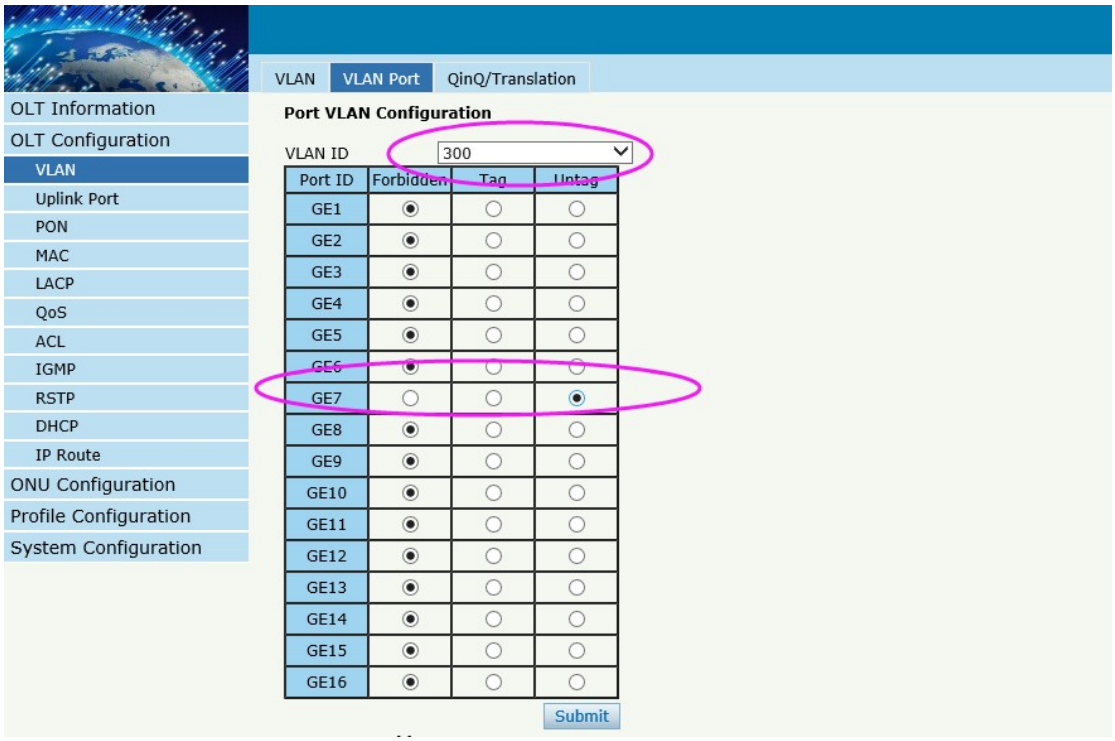
gpon-olt(config-pon-0/1)# ip igmp snooping user-vlan 300 group-vlan 300 tagged

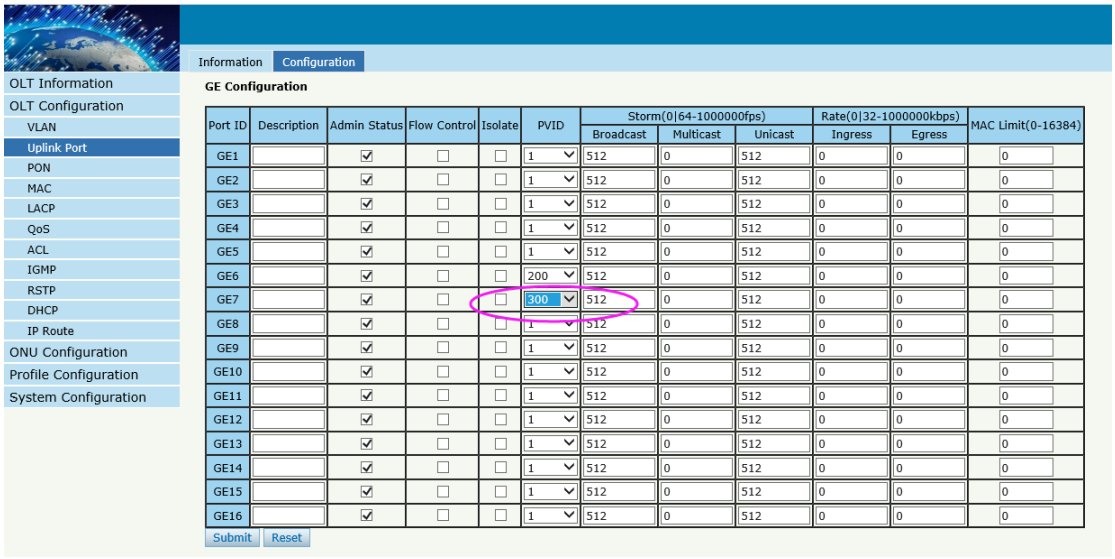
gpon-olt(config-pon-0/1)# exit

1,create a new VLAN for IGMP

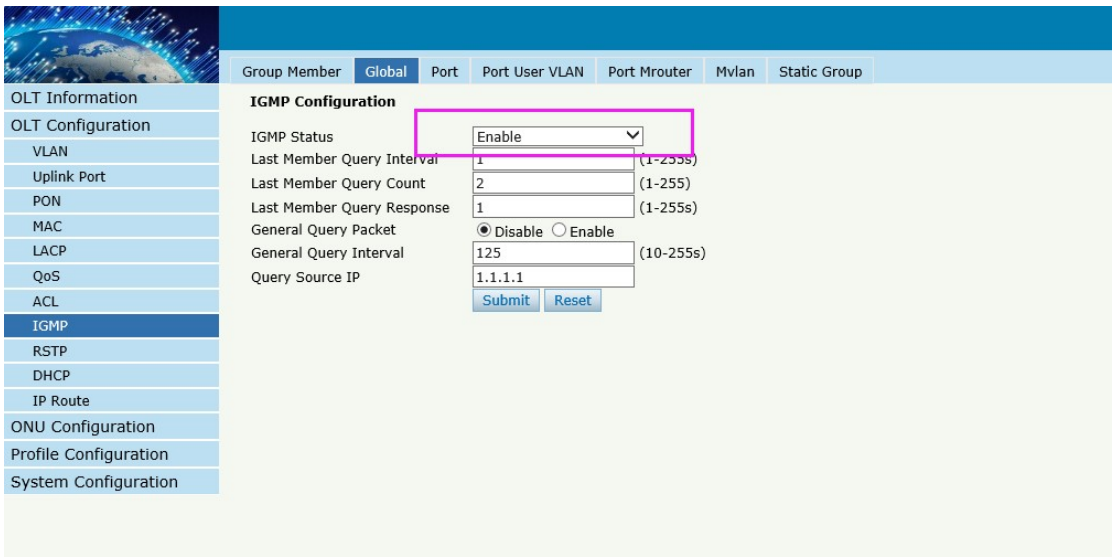


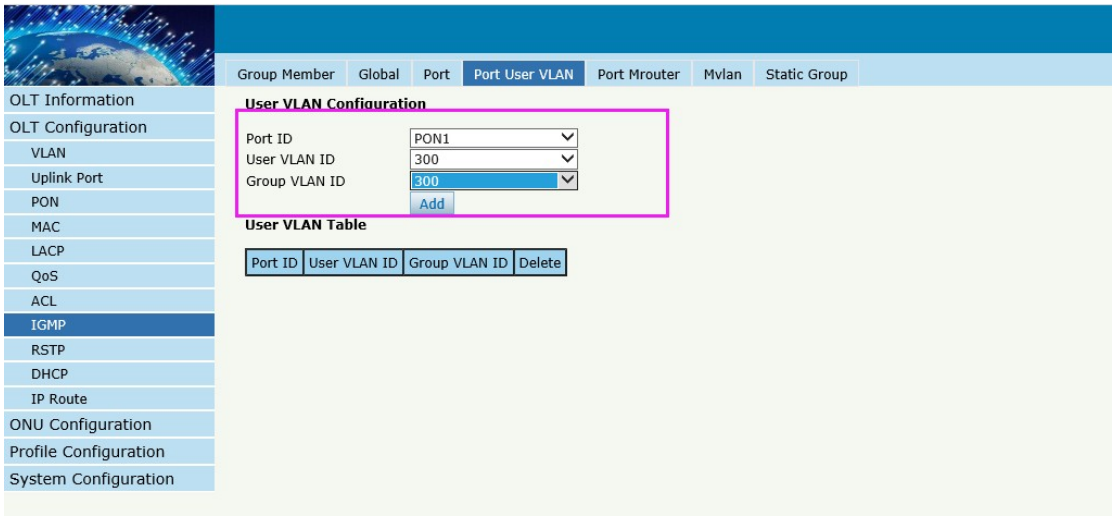

2, configure VLAN mode

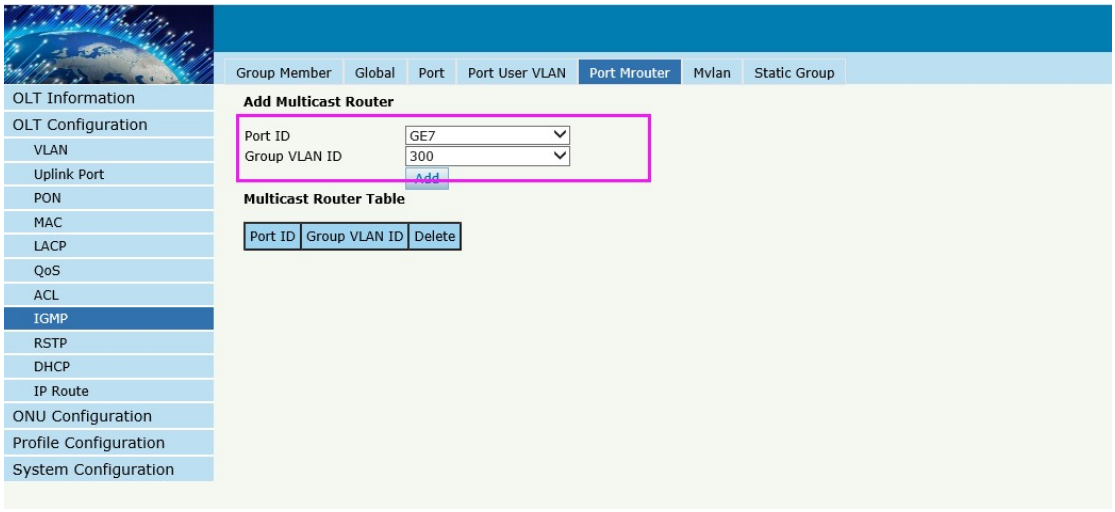


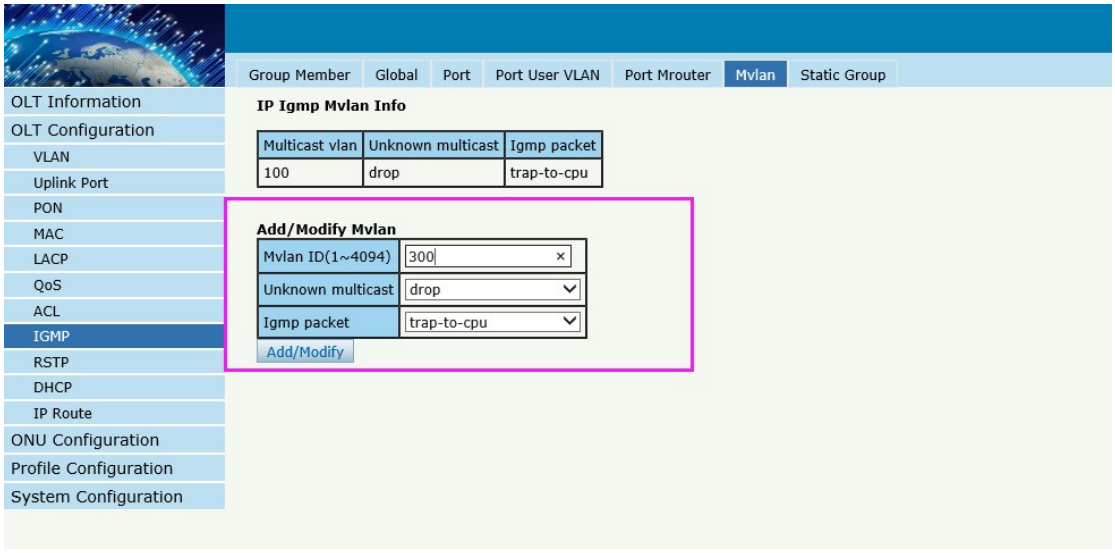




3,enable IGMP snooping function


Group Member
Global
Port
Port User VLAN
Port Mrouter
Mvlan
Static Group
OLT Information
OLT Configuration
VLAN
Uplink Port
PON
MAC
LACP
QoS
ACL
IGMP
RSTP
DHCP
IP Route
ONU Configuration
Profile Configuration
System Configuration
IGMP Configuration
IGMP Status
Enable
Last Member Query Interval
1
(1-255s)
Last Member Query Count
2
(1-255)
Last Member Query Response
1
(1-255s)
General Query Packet
Disable
Enable
General Query Interval
125
(10-255s)
Query Source IP
1.1.1.1
Submit
Reset


Group Member
Global
Port
Port User VLAN
Port Mrouter
Mvlan
Static Group
OLT Information
OLT Configuration
VLAN
Uplink Port
PON
MAC
LACP
QoS
ACL
IGMP
RSTP
DHCP
IP Route
ONU Configuration
Profile Configuration
System Configuration
User VLAN Configuration
Port ID
PON1
User VLAN ID
300
Group VLAN ID
300
Add
User VLAN Table
Port ID
User VLAN ID
Group VLAN ID
Delete


Group Member
Global
Port
Port User VLAN
Port Mrouter
Mvlan
Static Group
OLT Information
OLT Configuration
VLAN
Uplink Port
PON
MAC
LACP
QoS
ACL
IGMP
RSTP
DHCP
IP Route
ONU Configuration
Profile Configuration
System Configuration
Add Multicast Router
Port ID
GE7
Group VLAN ID
300
Add
Multicast Router Table
Port ID
Group VLAN ID
Delete




# Configuring the ONU

CLI

pon-olt(config)# interface gpon  0/1

gpon-olt(config-pon-0/1)# onu 1 tcont 1 dba dba_1

gpon-olt(config-pon-0/1)# onu 1 gemport 3 tcont 1

gpon-olt(config-pon-0/1)# onu 1 service 1 gemport 3 vlan 300

gpon-olt(config-pon-0/1)#onu 1 service-port 1 gemport 3 uservlan 300 vlan 300

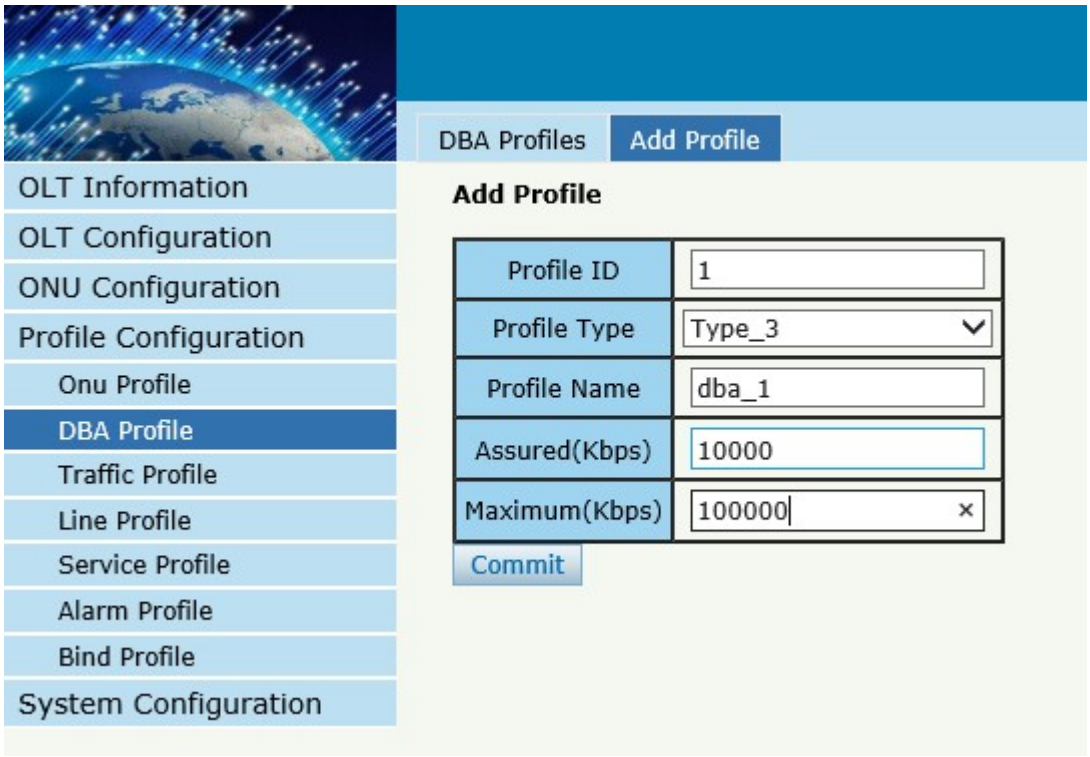
gpon-olt(config-pon-0/1)#onu 1 portvlan eth 1 mode hybrid def_vlan 300

gpon-olt(config-pon-0/1)# onu 1 mvlan 300

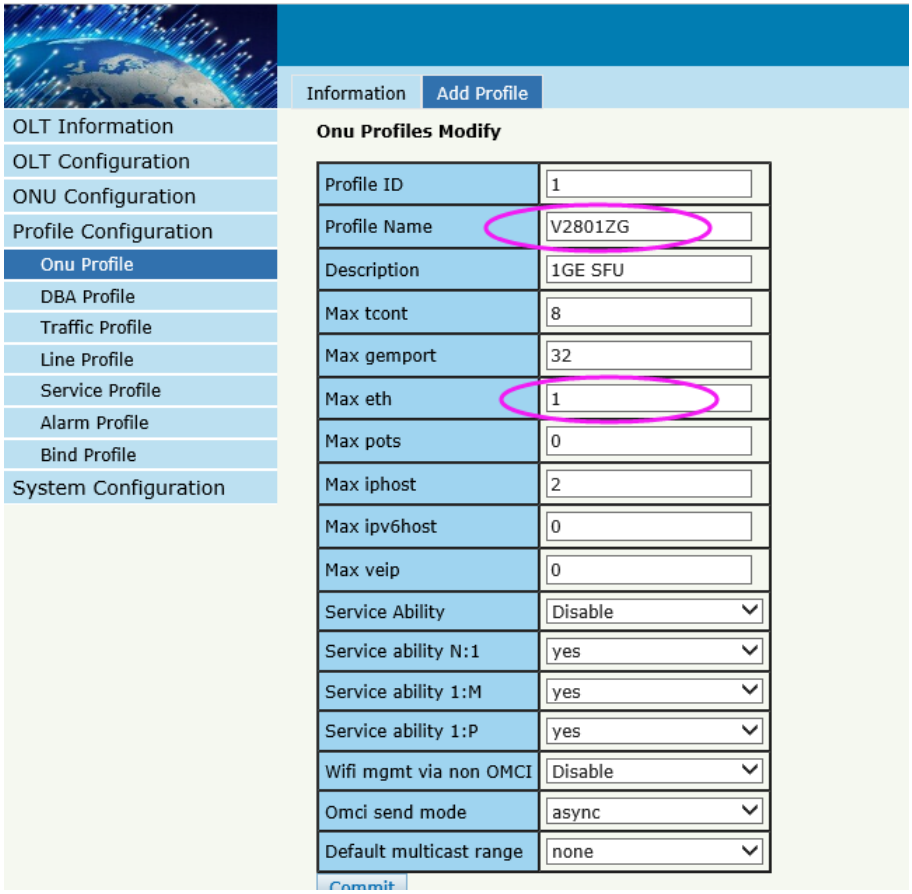
gpon-olt(config-pon-0/1)# onu 1 mvlan tag-strip eth 1

gpon-olt(config-pon-0/1)# exit

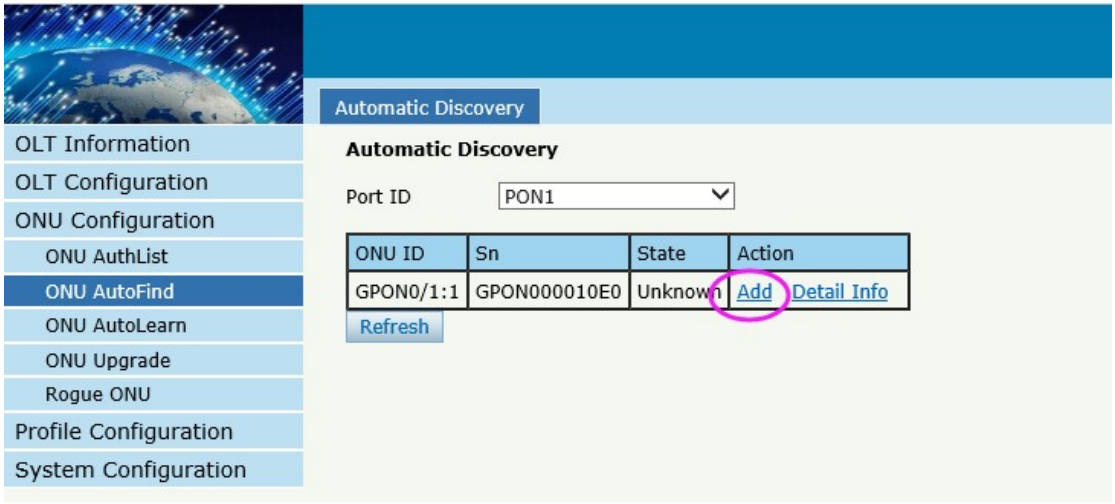
create DBA profile

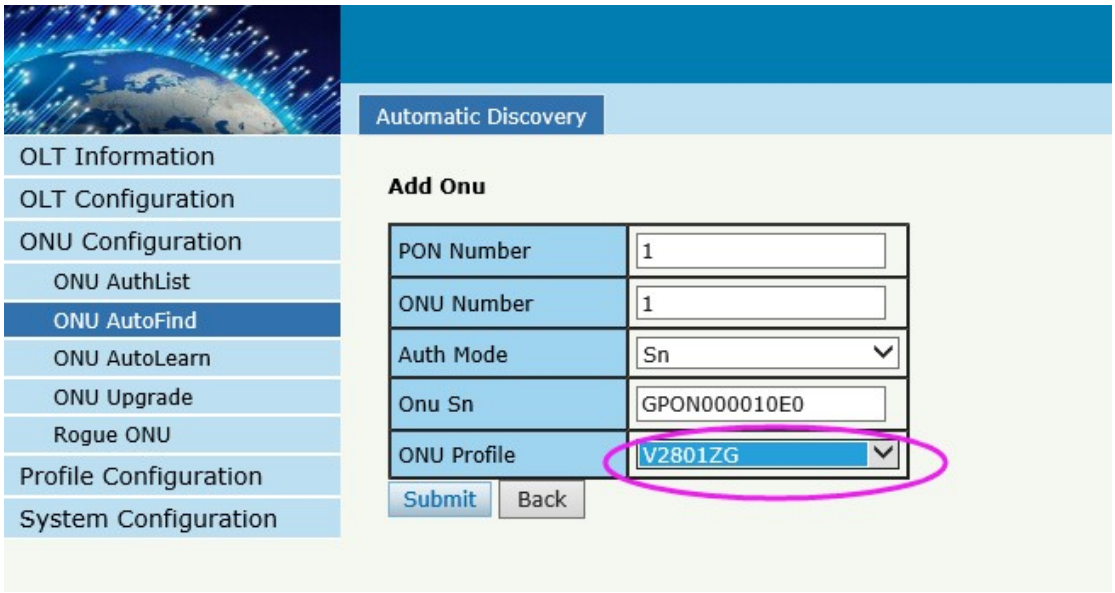



2, Create ONU profile for 1GE ONU

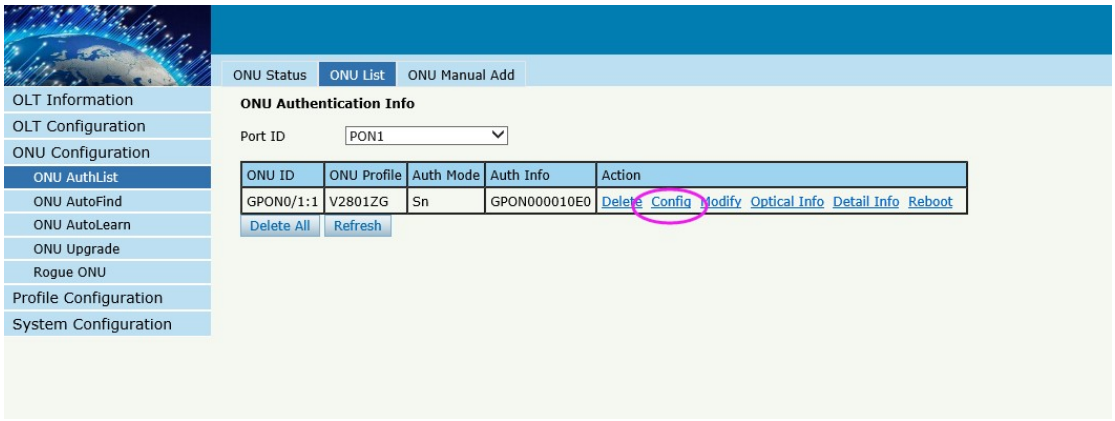


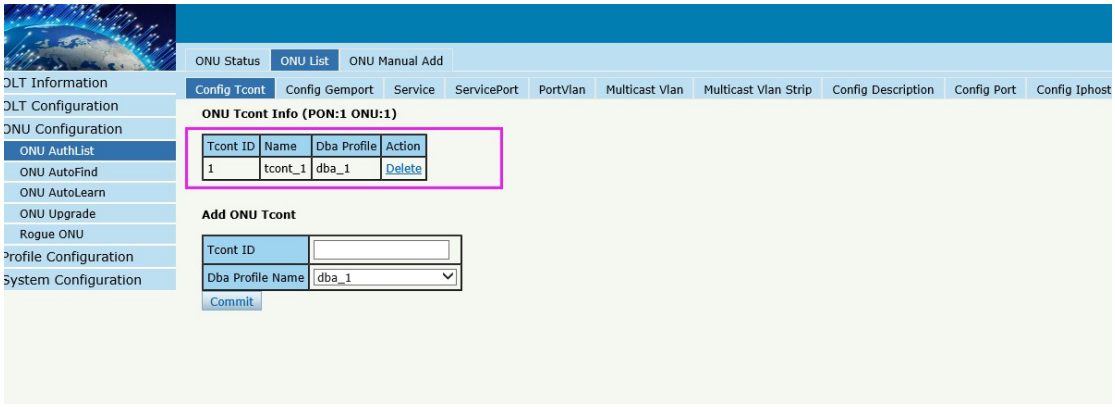
3,Authorize ONU

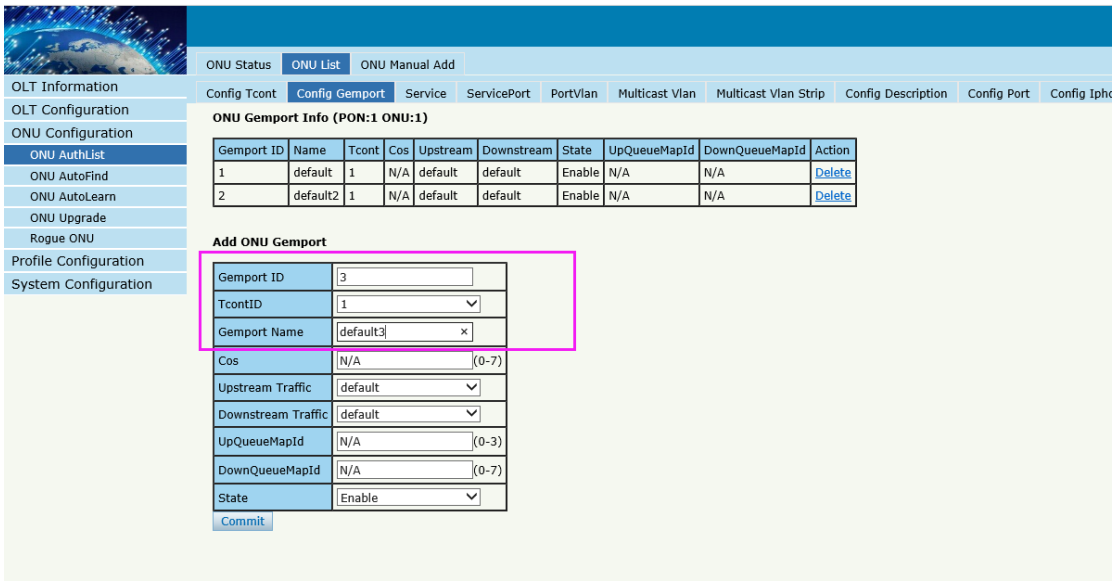


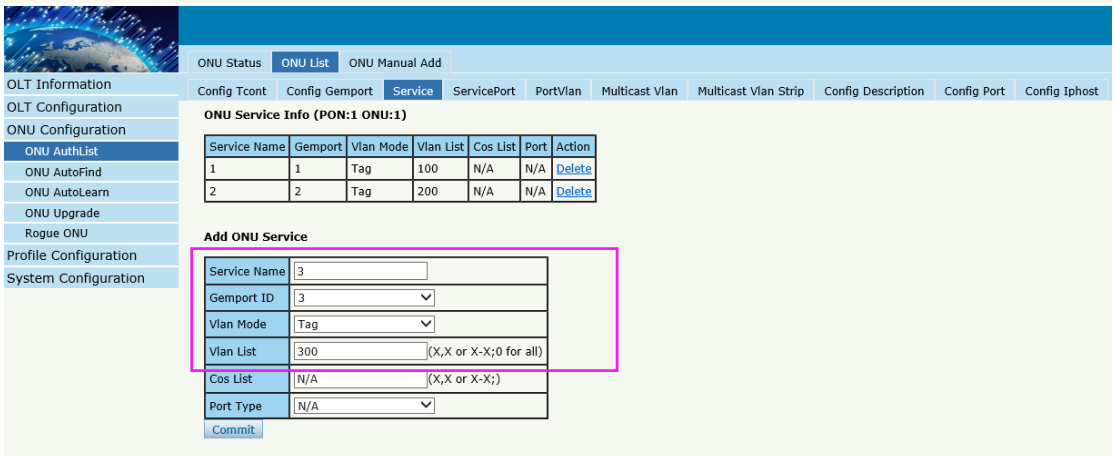



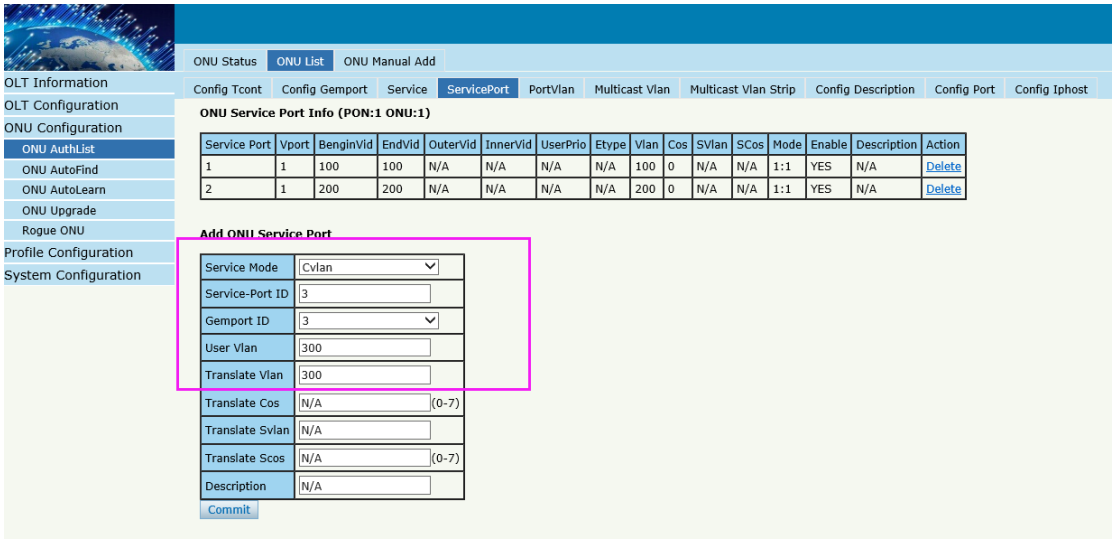

4,Configure ONU

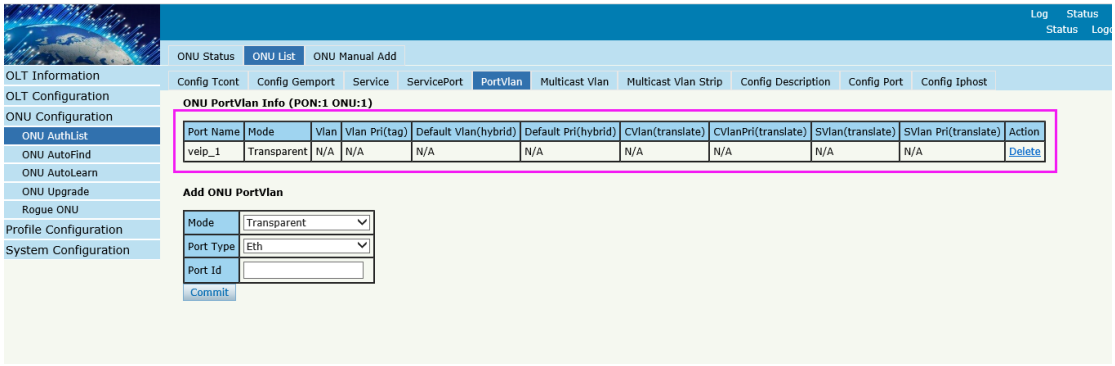


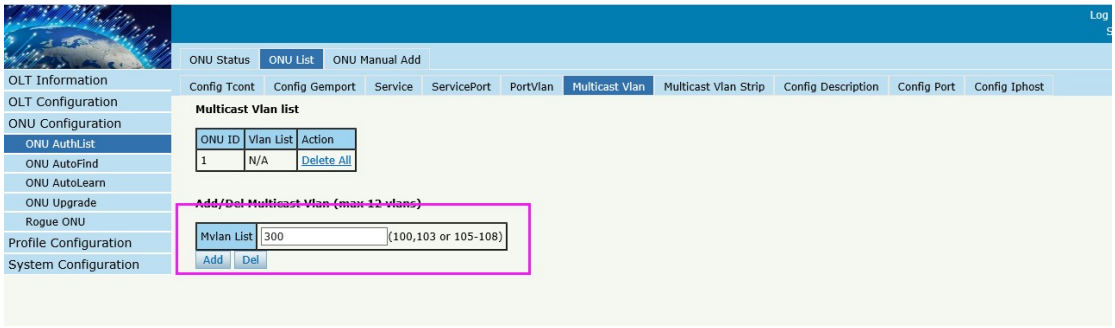

ONU Status
ONU List
ONU Manual Add
OLT Information
OLT Configuration
ONU Configuration
ONU AuthList
ONU AutoFind
ONU AutoLearn
ONU Upgrade
Rogue ONU
Profile Configuration
System Configuration
Config Tcont
Config Gemport
Service
ServicePort
PortVlan
Multicast Vlan
Multicast Vlan Strip
Config Description
Config Port
Config Iphost
ONU Tcont Info (PON:1 ONU:1)
Tcont ID
Name
Dba Profile
Action
1
tcont_1
dba_1
Delete
Add ONU Tcont
Tcont ID
Dba Profile Name
dba_1
Commit

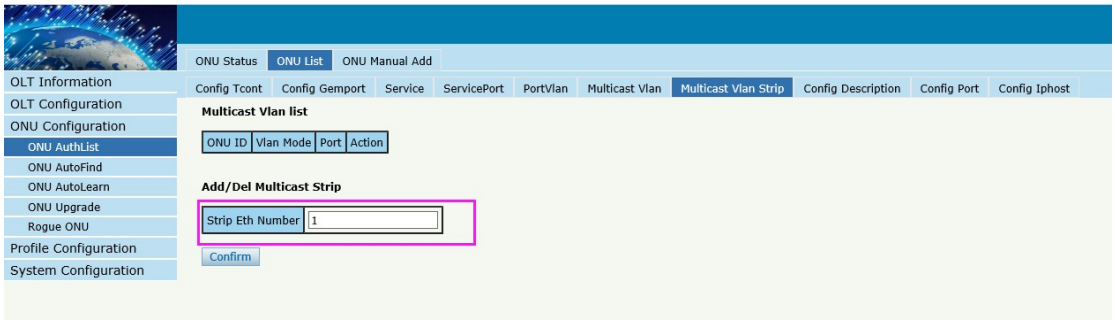

ONU Status
ONU List
ONU Manual Add
OLT Information
OLT Configuration
ONU Configuration
ONU AuthList
ONU AutoFind
ONU AutoLearn
ONU Upgrade
Rogue ONU
Profile Configuration
System Configuration
Config Tcont
Config Gemport
Service
ServicePort
PortVlan
Multicast Vlan
Multicast Vlan Strip
Config Description
Config Port
ONU Gemport Info (PON:1 ONU:1)
Gemport ID
Name
Tcont
Cos
Upstream
Downstream
State
UpQueueMapId
DownQueueMapId
Action
1
default
1
N/A
default
default
Enable
N/A
N/A
Delete
2
default2
1
N/A
default
default
Enable
N/A
N/A
Delete
Add ONU Gemport
Gemport ID
3
TcontID
1
Gemport Name
default3
Cos
N/A
(0-7)
Upstream Traffic
default
Downstream Traffic
default
UpQueueMapId
N/A
(0-3)
DownQueueMapId
N/A
(0-7)
State
Enable
Commit


ONU Status
ONU List
ONU Manual Add
OLT Information
OLT Configuration
ONU Configuration
ONU AuthList
ONU AutoFind
ONU AutoLearn
ONU Upgrade
Rogue ONU
Profile Configuration
System Configuration
Config Tcont
Config Gemport
Service
ServicePort
PortVlan
Multicast Vlan
Multicast Vlan Strip
Config Description
Config Port
Config Iphost
ONU Service Info (PON:1 ONU:1)
Service Name
Gemport
Vlan Mode
Vlan List
Cos List
Port
Action
1
1
Tag
100
N/A
N/A
Delete
2
2
Tag
200
N/A
N/A
Delete
Add ONU Service
Service Name
3
Gemport ID
3
Vlan Mode
Tag
Vlan List
300
(X,X or X-X;0 for all)
Cos List
N/A
(X,X or X-X;)
Port Type
N/A
Commit


ONU Status
ONU List
ONU Manual Add
OLT Information
OLT Configuration
ONU Configuration
ONU AuthList
ONU AutoFind
ONU AutoLearn
ONU Upgrade
Rogue ONU
Profile Configuration
System Configuration
Config Tcont
Config Gemport
Service
ServicePort
PortVlan
Multicast Vlan
Multicast Vlan Strip
Config Description
Config Port
Config Iphost
ONU Service Port Info (PON:1 ONU:1)
Service Port | Vport | BenginVid | EndVid | OuterVid | InnerVid | UserPrio | Etype | Vlan | Cos | SVlan | SCos | Mode | Enable | Description | Action
1 | 1 | 100 | 100 | N/A | N/A | N/A | N/A | 100 | 0 | N/A | N/A | 1:1 | YES | N/A | Delete
2 | 1 | 200 | 200 | N/A | N/A | N/A | N/A | 200 | 0 | N/A | N/A | 1:1 | YES | N/A | Delete
Add ONU Service Port
Service Mode: Cvlan
Service-Port ID: 3
Gemport ID: 3
User Vlan: 300
Translate Vlan: 300
Translate Cos: N/A (0-7)
Translate Svlan: N/A
Translate Scos: N/A (0-7)
Description: N/A
Commit

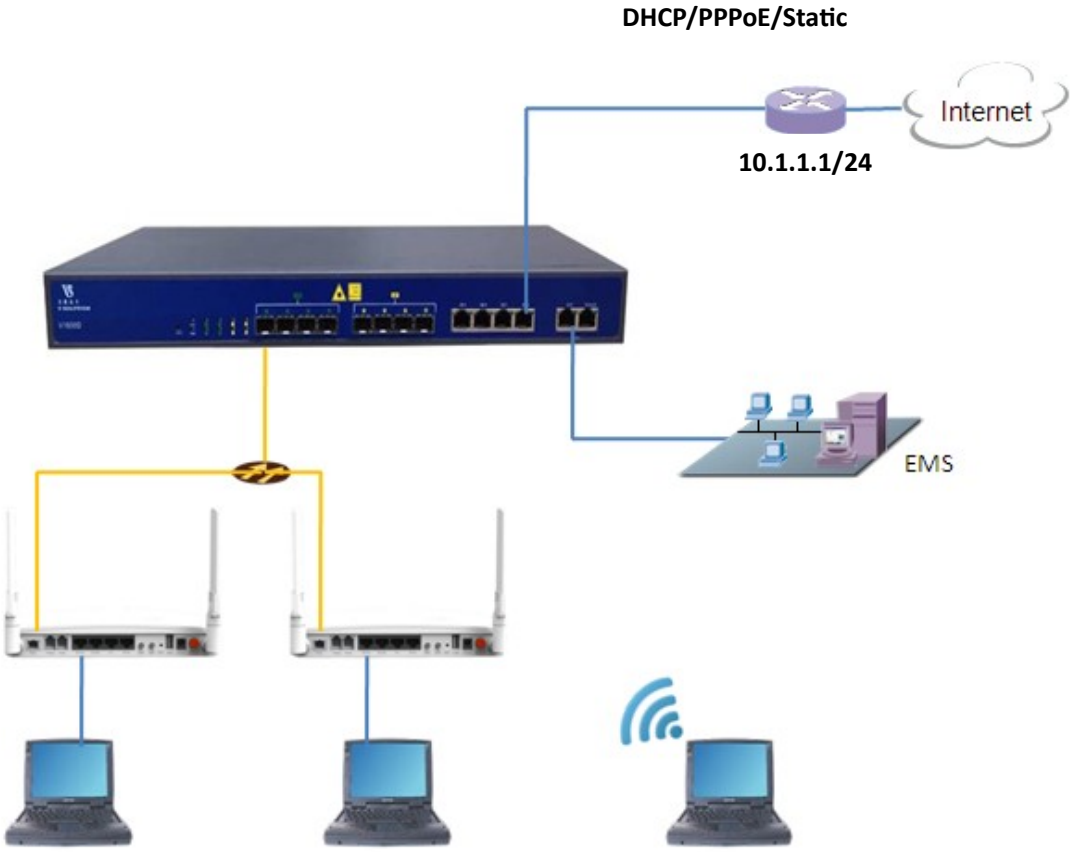

Log
Status
ONU Status
ONU List
ONU Manual Add
OLT Information
OLT Configuration
ONU Configuration
ONU AuthList
ONU AutoFind
ONU AutoLearn
ONU Upgrade
Rogue ONU
Profile Configuration
System Configuration
Config Tcont
Config Gemport
Service
ServicePort
PortVlan
Multicast Vlan
Multicast Vlan Strip
Config Description
Config Port
Config Iphost
ONU PortVlan Info (PON:1 ONU:1)
Port Name | Mode | Vlan | Vlan Pri(tag) | Default Vlan(hybrid) | Default Pri(hybrid) | CVlan(translate) | CVlanPri(translate) | SVlan(translate) | SVlan Pri(translate) | Action
veip_1 | Transparent | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | Delete
Add ONU PortVlan
Mode: Transparent
Port Type: Eth
Port Id
Commit


Log
ONU Status
ONU List
ONU Manual Add
OLT Information
OLT Configuration
ONU Configuration
ONU AuthList
ONU AutoFind
ONU AutoLearn
ONU Upgrade
Rogue ONU
Profile Configuration
System Configuration
Config Tcont
Config Gemport
Service
ServicePort
PortVlan
Multicast Vlan
Multicast Vlan Strip
Config Description
Config Port
Config Iphost
Multicast Vlan list
ONU ID | Vlan List | Action
1 | N/A | Delete All
Add/Del Multicast Vlan (max 12 vlans)
Mvlan List: 300 (100,103 or 105-108)
Add
Del


ONU Status
ONU List
ONU Manual Add
OLT Information
OLT Configuration
ONU Configuration
ONU AuthList
ONU AutoFind
ONU AutoLearn
ONU Upgrade
Rogue ONU
Profile Configuration
System Configuration
Config Tcont
Config Gemport
Service
ServicePort
PortVlan
Multicast Vlan
Multicast Vlan Strip
Config Description
Config Port
Config Iphost
Multicast Vlan list
ONU ID | Vlan Mode | Port | Action
Add/Del Multicast Strip
Strip Eth Number: 1
Confirm

# Case 4 HGU Router --Internet

## Network Diagram




## Planning Data

| Item | | Description | Example |
|---|---|---|---|
| ONU Information | Slot No. | The number of the slot actually used. | 0 |
| | PON No. | The number of the actually used PON port. | 1 |
| | ONU Auth No. | Configure according to the network planning of theoperator. | 1 |
| | ONU Type | The type of the ONU. | HG326RGW |
| OLT | Service | The VLAN ID of the uplink port service. | VLAN mode = UNTAG |

| | | | |
|---|---|---|---|
| | Uplink VLAN | | PVID = 100 |
| | Service Uplink port | Configure according to the number of the actuallyused uplink port. | GE8 |
| | Service PON VLAN | The VLAN ID of the PON port service. | VLAN mode = TAG<br>VLAN ID = 100 |
| | Service PON port | Configure according to the number of the actuallyused PON port. | PON1 |
| ONU | Service LAN VLAN | The VLAN ID of the LAN port service. | Default<br>No VLAN |
| | Service LAN port | The number of the actually used ONU port. | LAN1 |
| | Service LAN VLAN | The VLAN ID of the LAN port service. | VLAN mode = TAG<br>PVID = 100 |
| | Service LAN port | The number of the actually used ONU port. | LAN1 |
| | Tcont | The onu Tcont | Tcont=1 |
| | Gemport | The onu Gemport | Gemport=1 |
| | Dba | The ONU dba profile | Dba name=dba_1<br>Dba type = 3 |
| | Service vlan | The vlan of ONU service. | Service Vlan = 100 |
| | Service-port uservlan | The vlan of onu service-port | Service-port vlan =100 |
| | WiFi | Wireless's SSID name,Security. | SSID1 name = SSID-1<br>Security method = WAP2 Mixed<br>WPA Encryption = TKIP<br>WPA2 Encryption = AES<br>KEY = 12345678 |
| | Service WAN VLAN | The VLAN ID of the PON(WAN) port service. | VLAN ID = 100 |
| | If WAN use DHCP mode | The router use DHCP assign ip to terminal user. | Gateway = 10.1.1.1<br>IP Range 10.1.1.2-10.1.1.254<br>IP Mask = 255.255.255.0<br>DNS = 8.8.8.8 |
| | If WAN use PPPoE mode | The router use PPPoE assign ip to terminal user. | IP Range 10.1.1.2-10.1.1.254<br>IP Mask = 255.255.255.0<br>User name = test<br>Password = test |
| | If WAN use | The router use Static assign ip to | Gateway = 10.1.1.1 |

| | | | |
|---|---|---|---|
| | Static mode | terminal user. | IP = 10.1.1.100<br>IP Mask = 255.255.255.0<br>DNS = 8.8.8.8 |
| PC | DHCP mode | The ONU use DHCP assign ip to PC. | Gateway = 192.168.1.1<br>IP = 192.168.1.2<br>IP Mask = 255.255.255.0<br>DNS = 192.168.1.1 |

# Configuring the OLT

**By CLI ----------**

gpon-olt(config)# vlan 100

gpon-olt(config-vlan-100)# exit

gpon-olt(config)# interface gigabitethernet 0/8

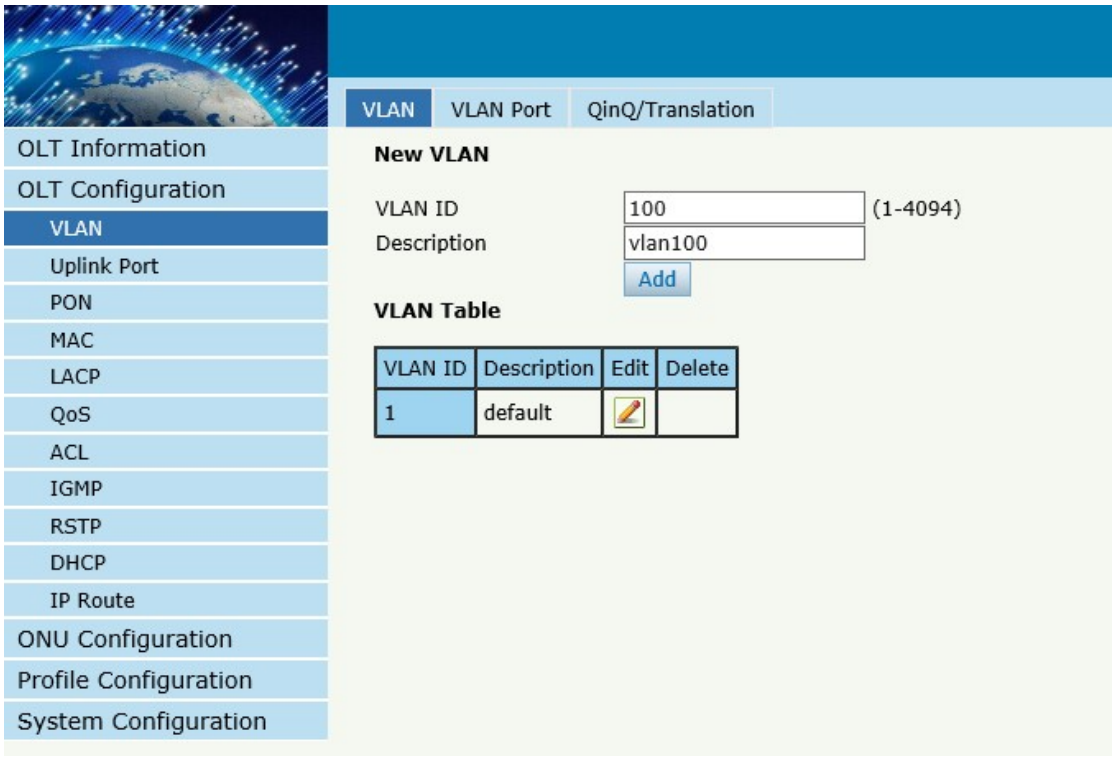
gpon-olt(config-if-ge0/8)# switchport hybrid vlan 100 untagged

gpon-olt(config-if-ge0/8)# switchport hybrid pvid vlan 100

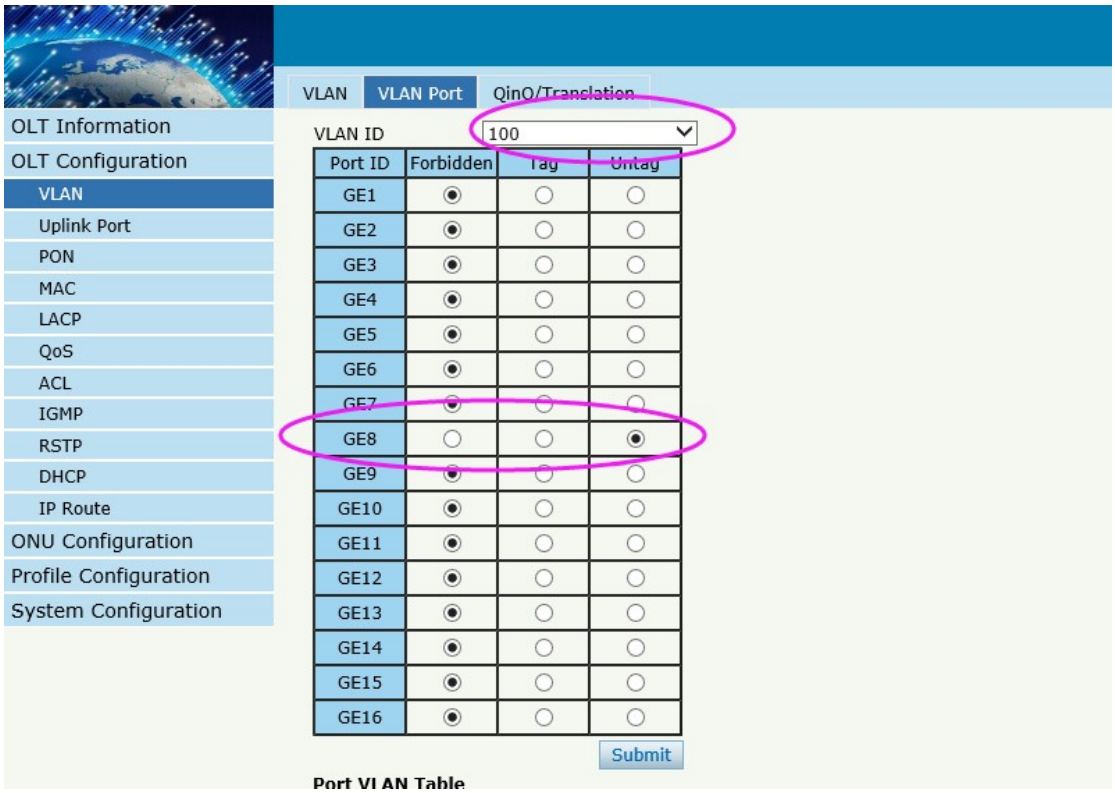
gpon-olt(config-if-ge0/8)# exit

**By web ----------**

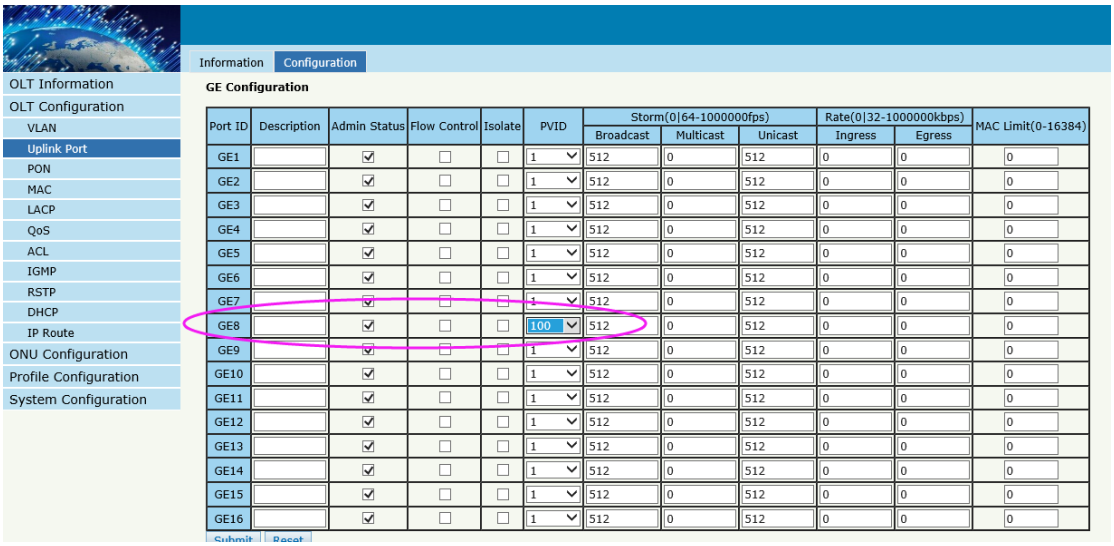
1,Create a new VLAN




2. configure GE port VLAN mode




3, configure GE port PVID




# Configuring the ONU

**By CLI ----------**

gpon-olt(config)# interface gpon 0/1

gpon-olt(config-pon-0/1)# onu 1 tcont 1 dba dba_1

gpon-olt(config-pon-0/1)# onu 1 gemport 1 tcont 1

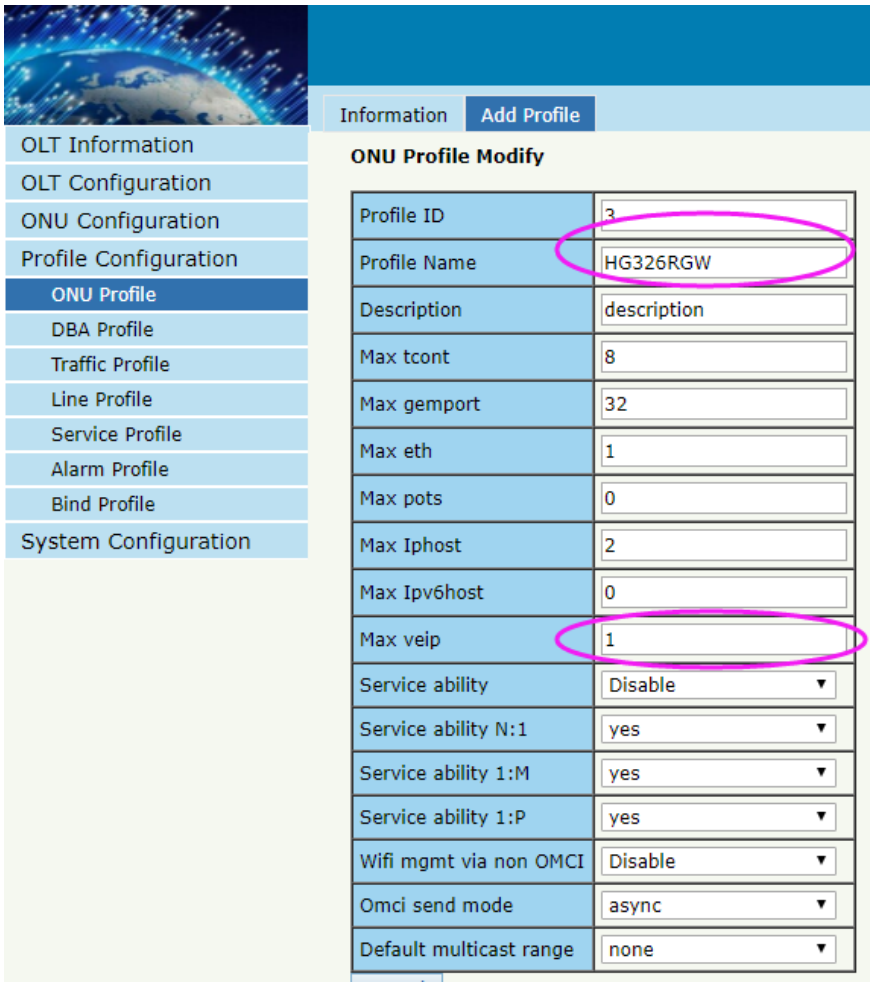
gpon-olt(config-pon-0/1)# onu 1 service 1 gemport 1 vlan 100

gpon-olt(config-pon-0/1)# onu 1 service-port 1 gemport 1 uservlan 100 vlan 100

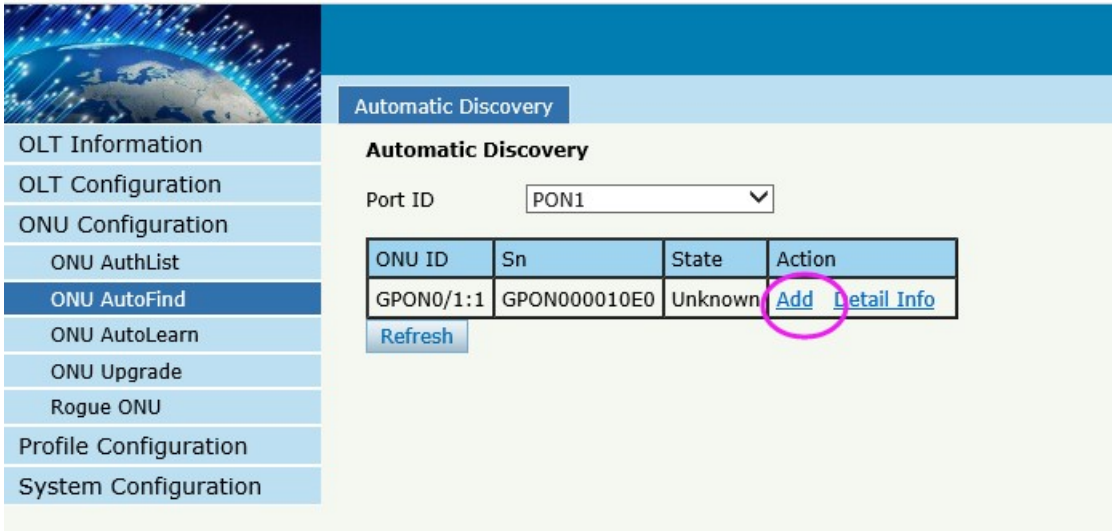
gpon-olt(config-pon-0/1)# onu 1 portvlan veip 1 mode transparent

1, Create ONU profile for 4GE HGU

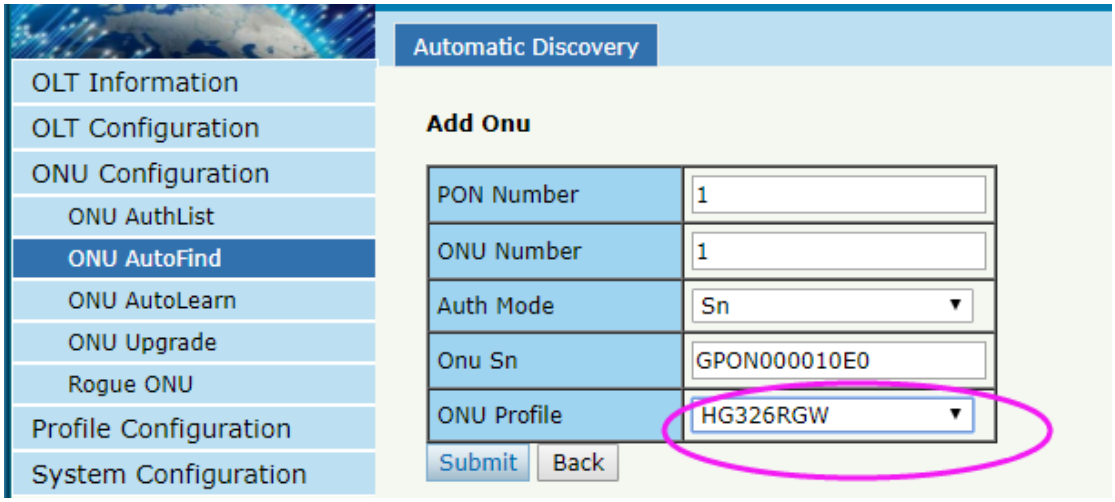
**By web ----------**



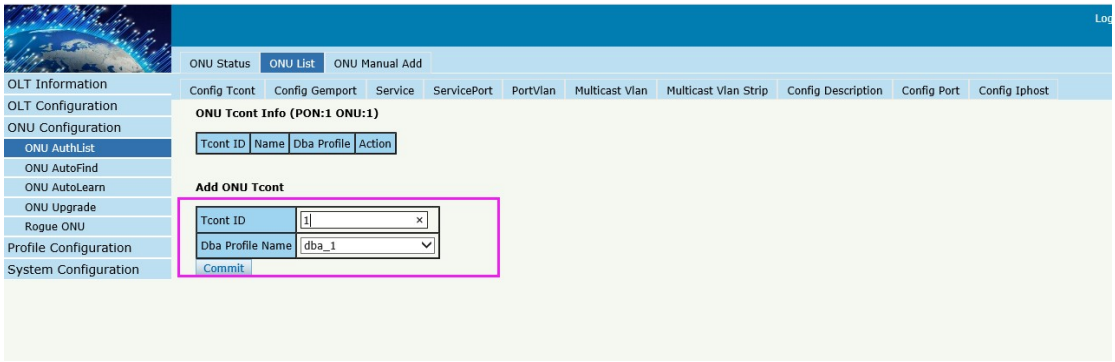

2, Find the ONU of Autofind lists and perform authorization operations on it

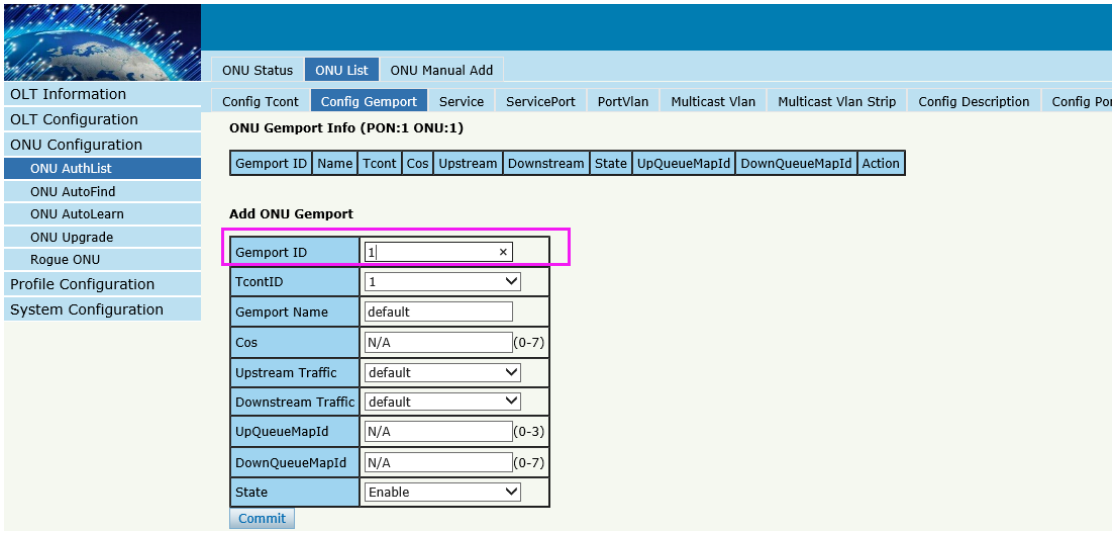


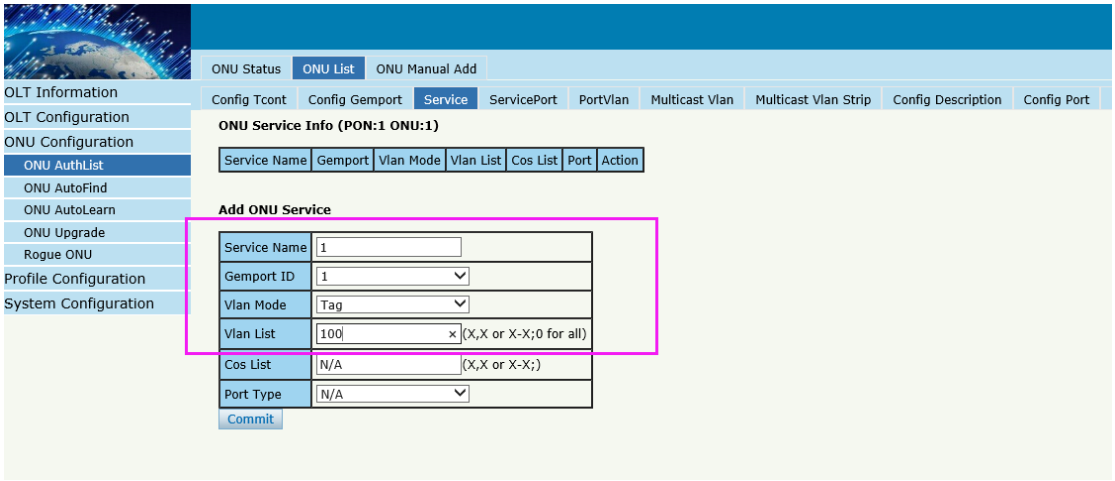

3, Select the 1GE ONU template

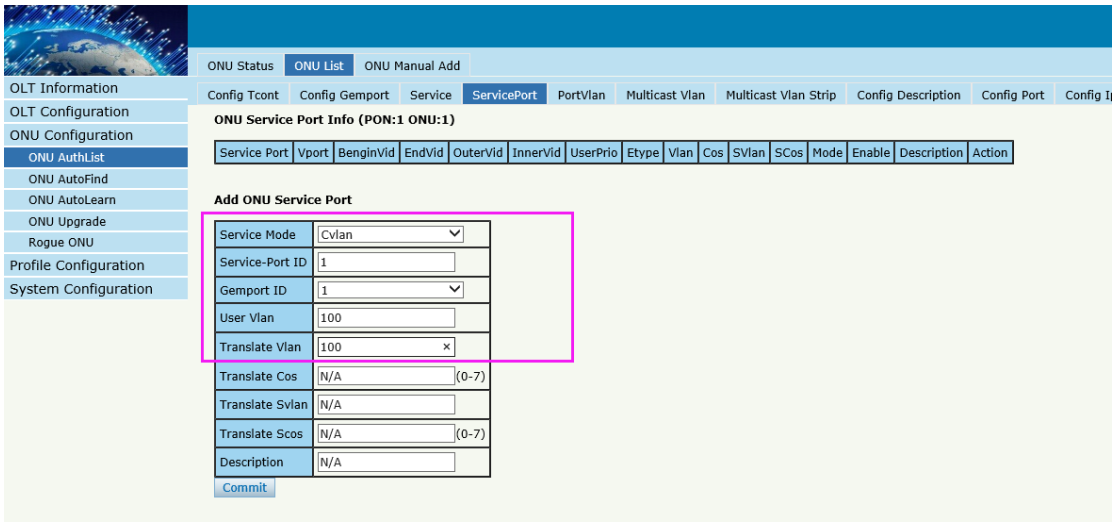


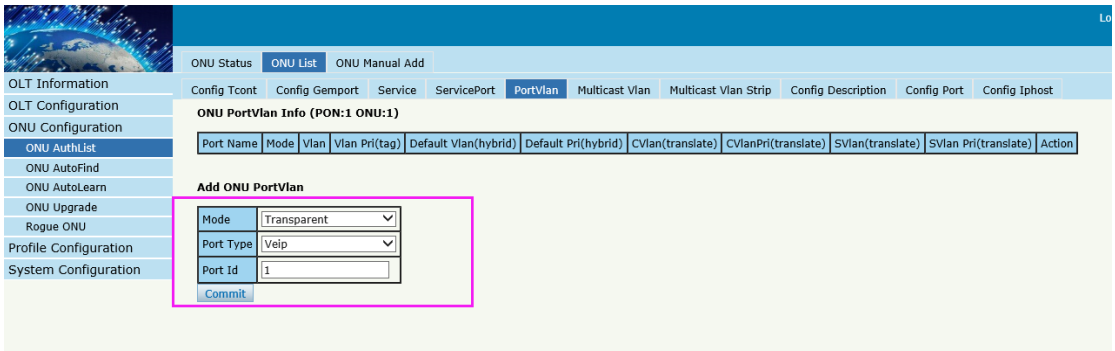

4, Configure ONU



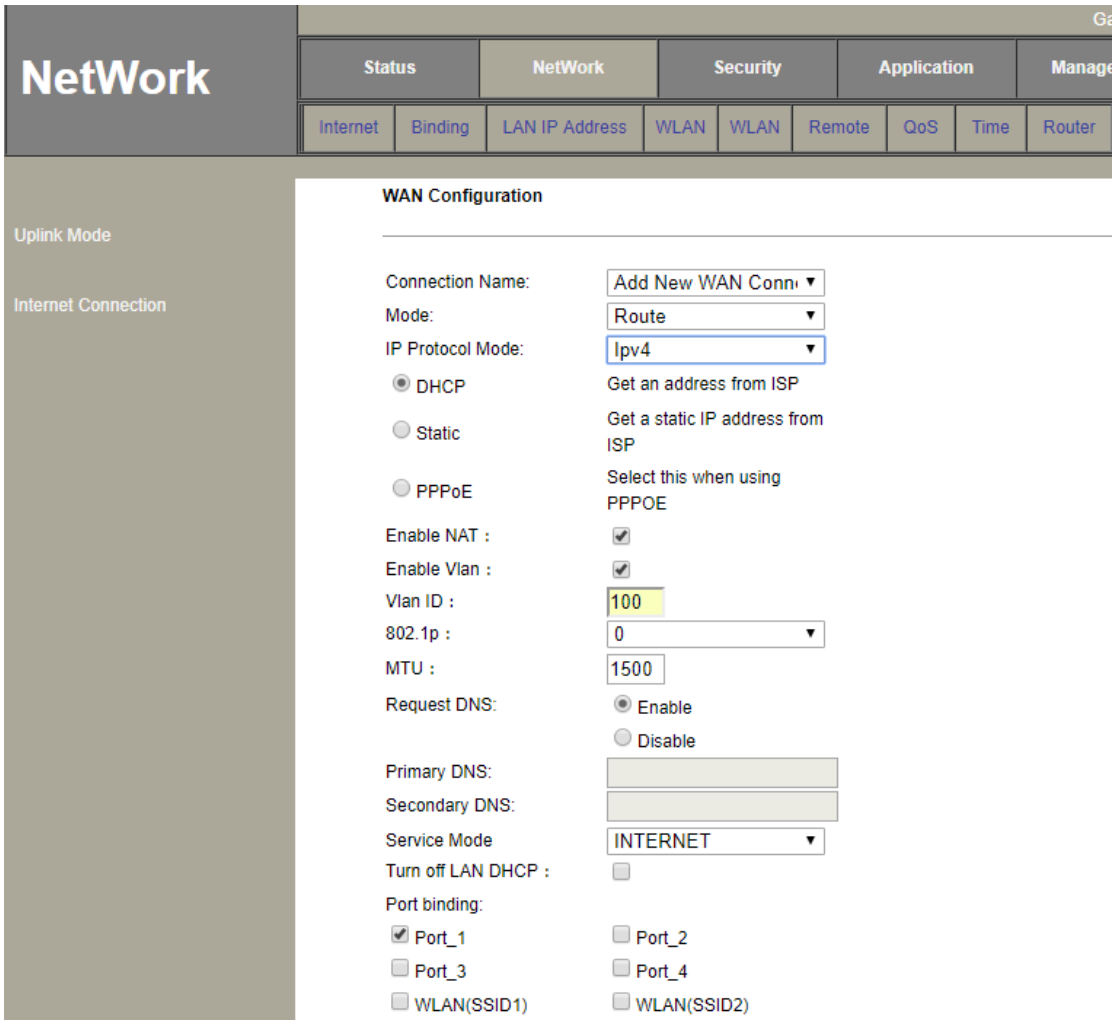


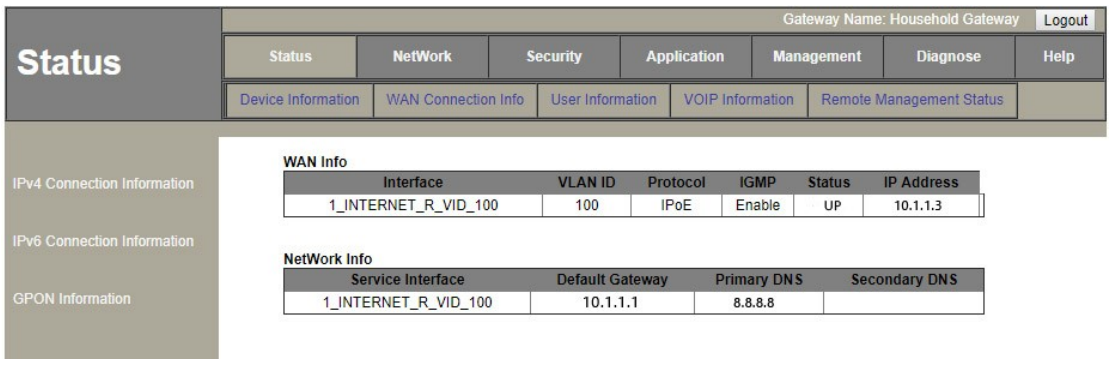




## By ONU web ----------

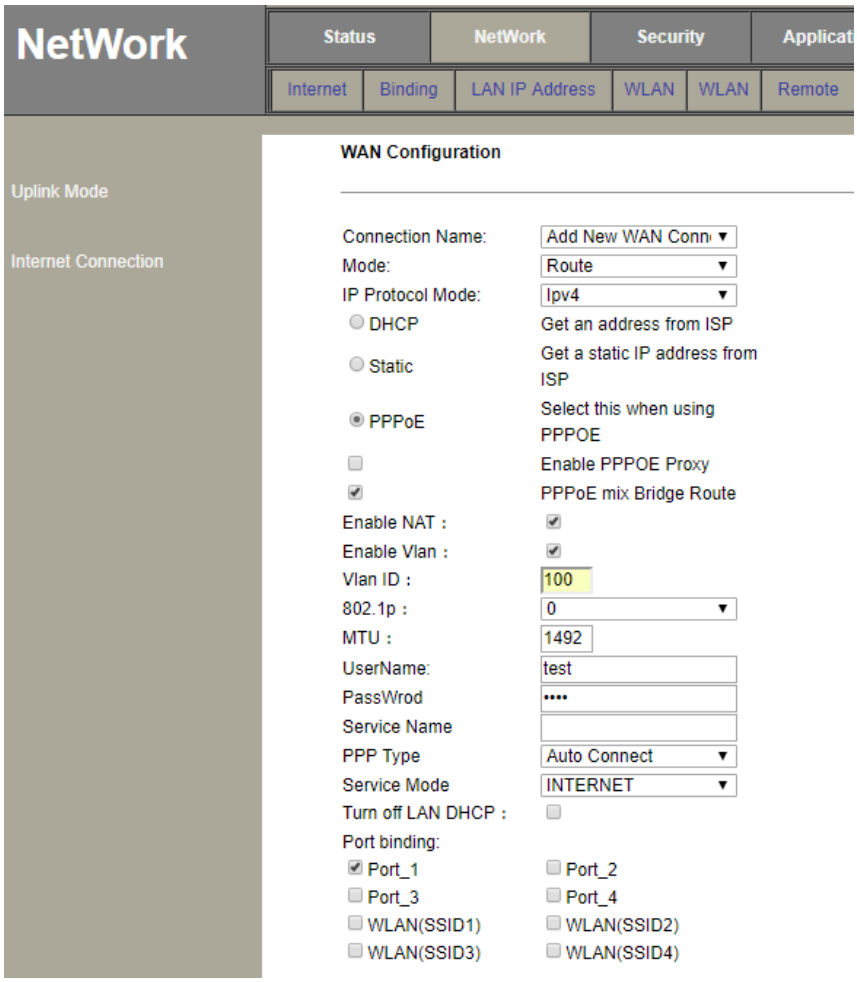
If DHCP mode



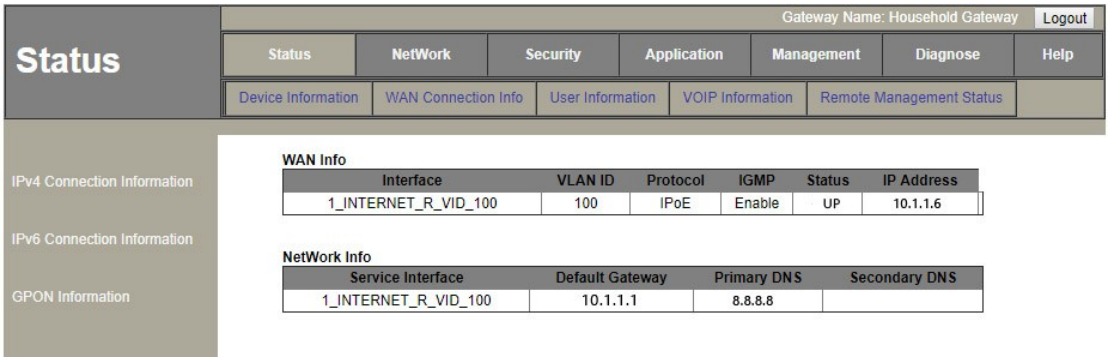

The connection status



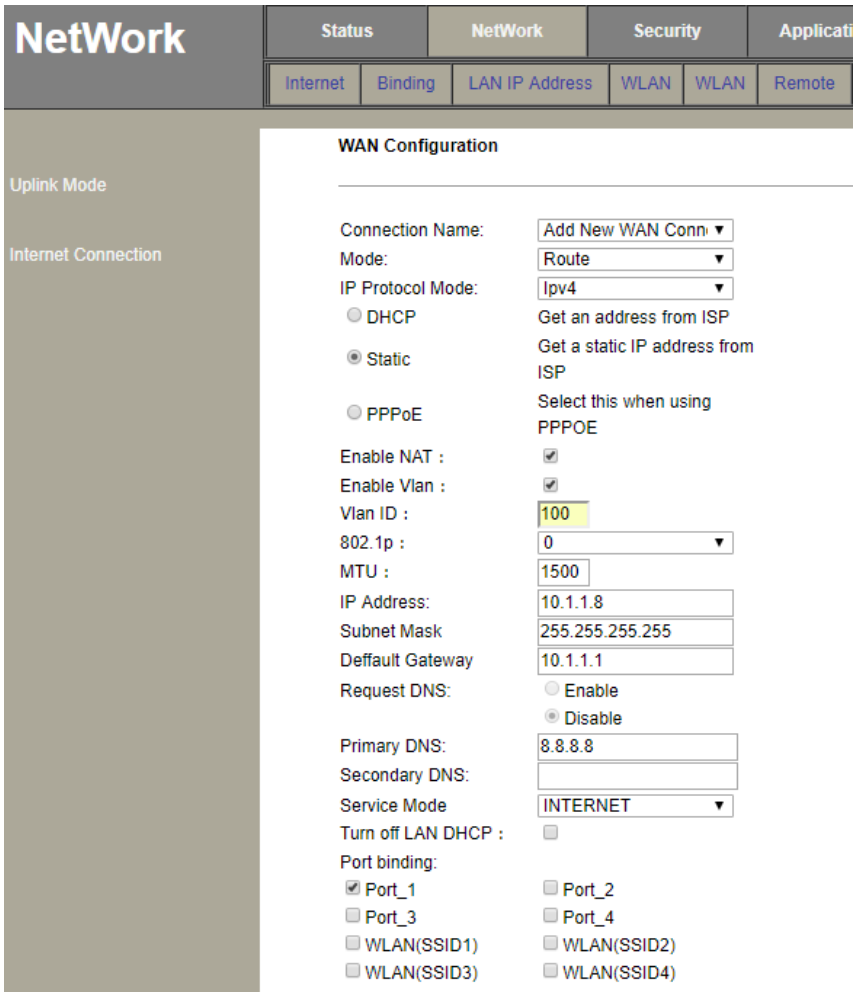

If PPPoE mode



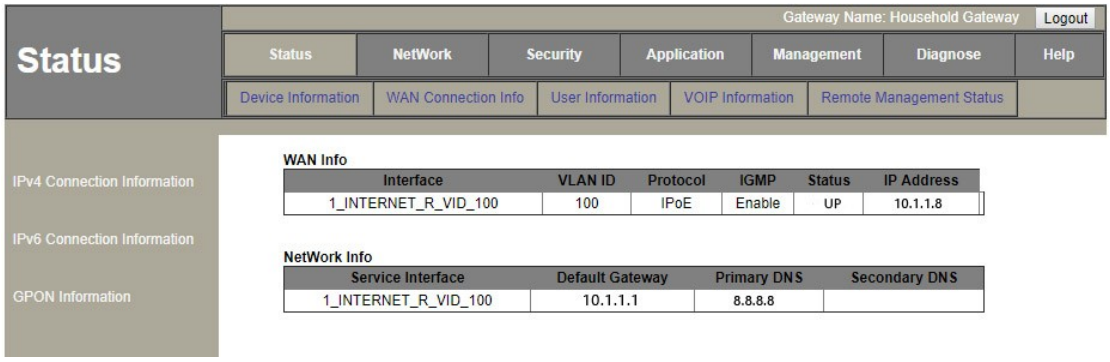

The connection status



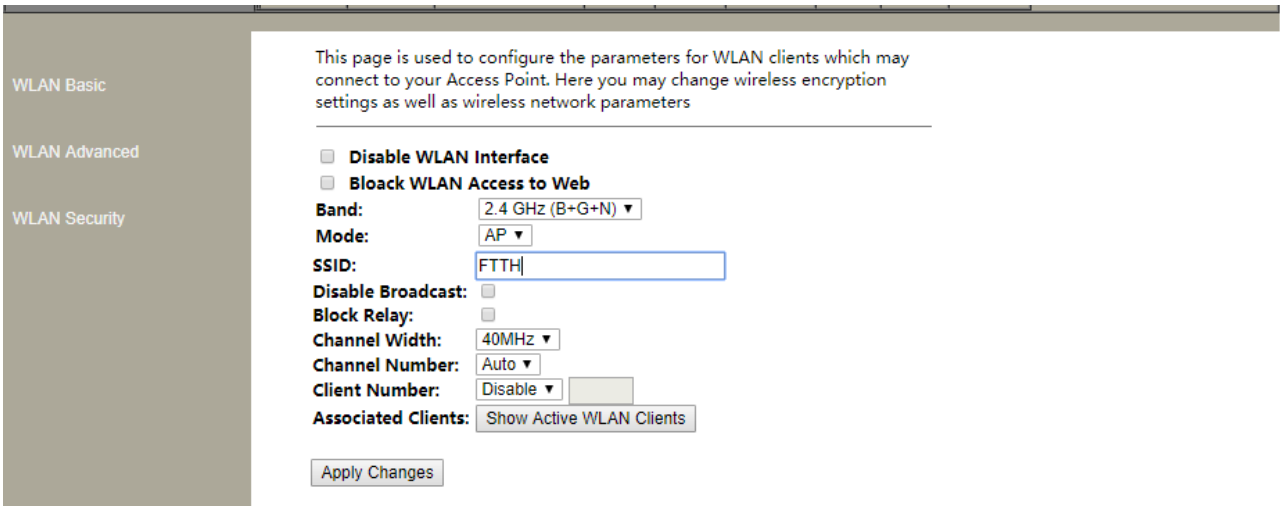

If Static mode

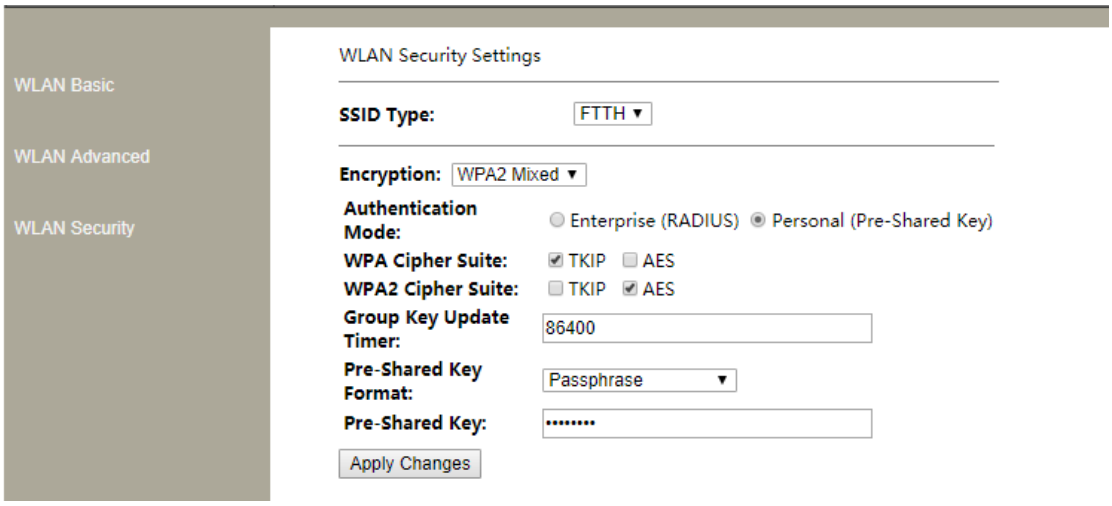



The connection status



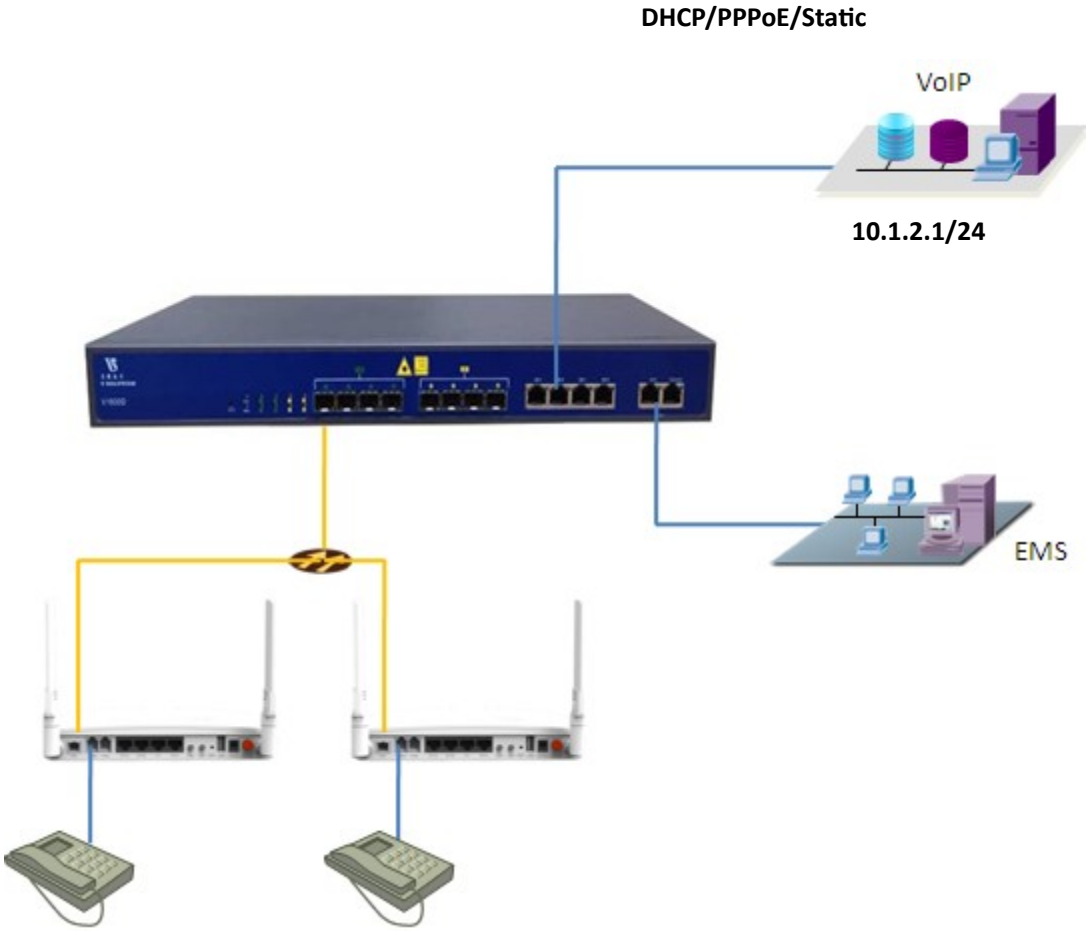

WiFi


WLAN Basic
WLAN Advanced
WLAN Security
This page is used to configure the parameters for WLAN clients which may connect to your Access Point. Here you may change wireless encryption settings as well as wireless network parameters
Disable WLAN Interface
Bloack WLAN Access to Web
Band:
2.4 GHz (B+G+N)
Mode:
AP
SSID:
FTTH
Disable Broadcast:
Block Relay:
Channel Width:
40MHz
Channel Number:
Auto
Client Number:
Disable
Associated Clients:
Show Active WLAN Clients
Apply Changes


WLAN Basic
WLAN Advanced
WLAN Security
WLAN Security Settings
SSID Type:
FTTH
Encryption:
WPA2 Mixed
Authentication Mode:
Enterprise (RADIUS)
Personal (Pre-Shared Key)
WPA Cipher Suite:
TKIP
AES
WPA2 Cipher Suite:
TKIP
AES
Group Key Update Timer:
86400
Pre-Shared Key Format:
Passphrase
Pre-Shared Key:
Apply Changes

# Case 5 HGU Router --VoIP

## Network Diagram




## Planning Data

| Item | | Description | Example |
|---|---|---|---|
| ONU Information | Slot No. | The number of the slot actually used. | 0 |
| | PON No. | The number of the actually used PON port. | 1 |
| | ONU Auth No. | Configure according to the network planning of theoperator. | 1 |
| | ONU Type | The type of the ONU. | HG326RGW |

| | | | |
|---|---|---|---|
| OLT | Service Uplink VLAN | The VLAN ID of the uplink port service. | VLAN mode = UNTAG<br>PVID = 200 |
| | Service Uplink port | Configure according to the number of the actuallyused uplink port. | GE6 |
| | Service PON VLAN | The VLAN ID of the PON port service. | VLAN mode = TAG<br>VLAN ID = 200 |
| | Service PON port | Configure according to the number of the actuallyused PON port. | PON1 |
| ONU | Service WAN VLAN | The VLAN ID of the PON(WAN) port service. | VLAN ID = 200 |
| | Service POTS port | The number of the actually used ONU port. | POTS1 |
| | Tcont | The onu Tcont | Tcont=1 |
| | Gemport | The onu Gemport | Gemport=1 |
| | Dba | The ONU dba profile | Dba name=dba_1<br>Dba type = 3 |
| | Service vlan | The vlan of ONU service. | Service Vlan = 200 |
| | Service-port uservlan | The vlan of onu service-port | Service-port vlan =200 |
| | If WAN use DHCP mode | The router use DHCP assign ip to ONU. | Gateway = 10.1.2.1<br>IP Range 10.1.2.2-10.1.2.254<br>IP Mask = 255.255.255.0<br>DNS = 8.8.8.8 |
| | If WAN use PPPoE mode | The router use PPPoE assign ip to ONU. | IP Range 10.1.2.2-10.1.2.254<br>IP Mask = 255.255.255.0<br>User name = test1<br>Password = test1 |
| | If WAN use Static mode | The router use Static assign ip to ONU. | Gateway = 10.1.2.1<br>IP = 10.1.2.100<br>IP Mask = 255.255.255.0<br>DNS = 8.8.8.8 |

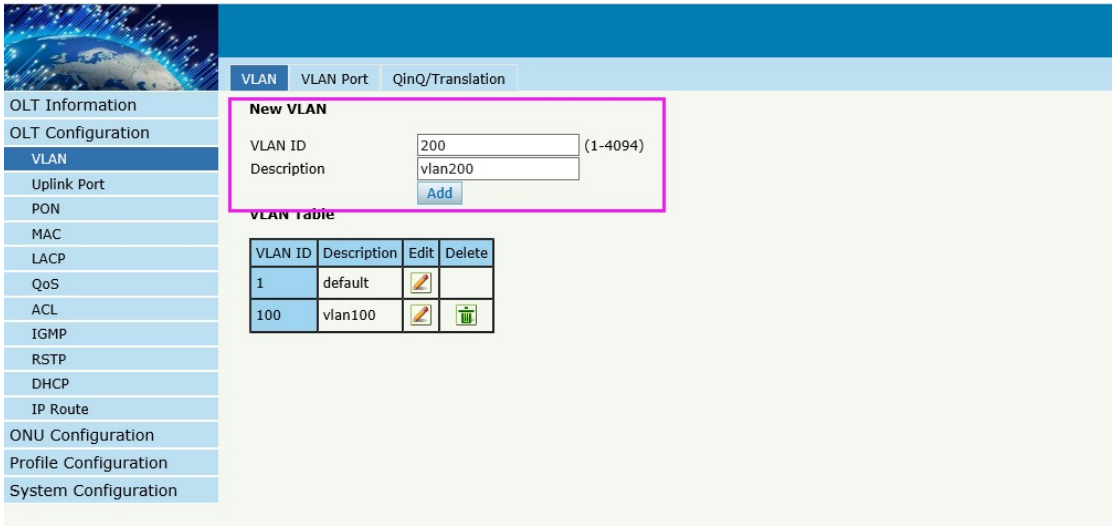
# Configuring the OLT

**By CLI ----------**

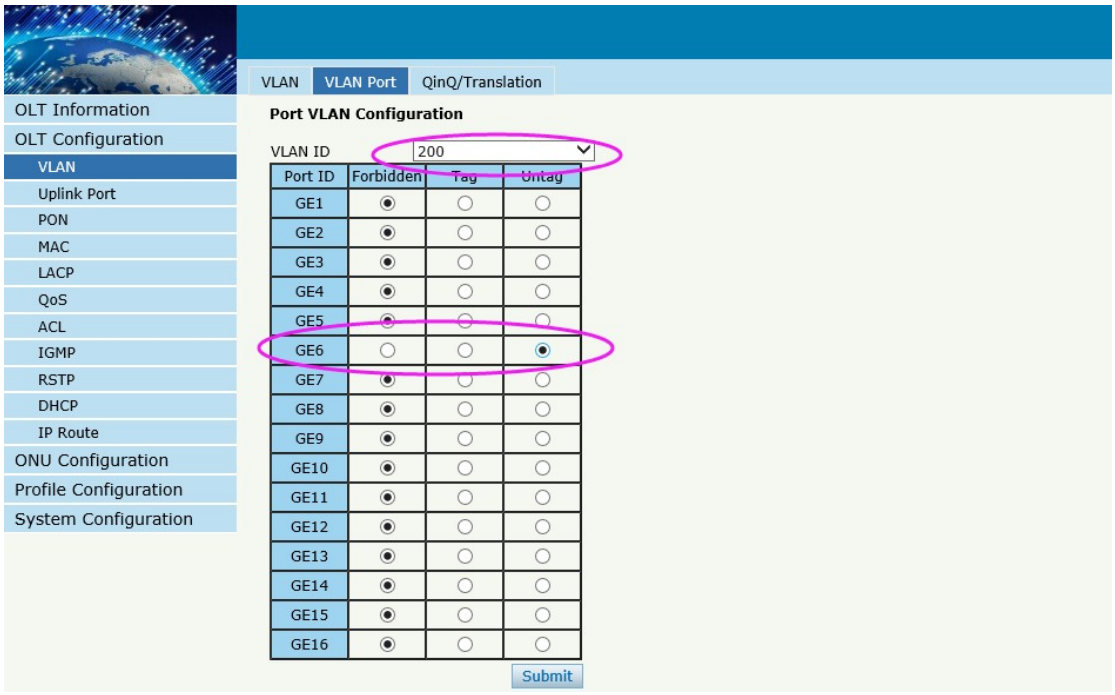
gpon-olt(config)# vlan 200
gpon-olt(config-vlan-200)# exit
gpon-olt(config)# interface gigabitethernet 0/6
gpon-olt(config-if-ge0/6)# switchport hybrid vlan 200 untagged
gpon-olt(config-if-ge0/6)# switchport hybrid pvid vlan 200
gpon-olt(config-if-ge0/6)# exit

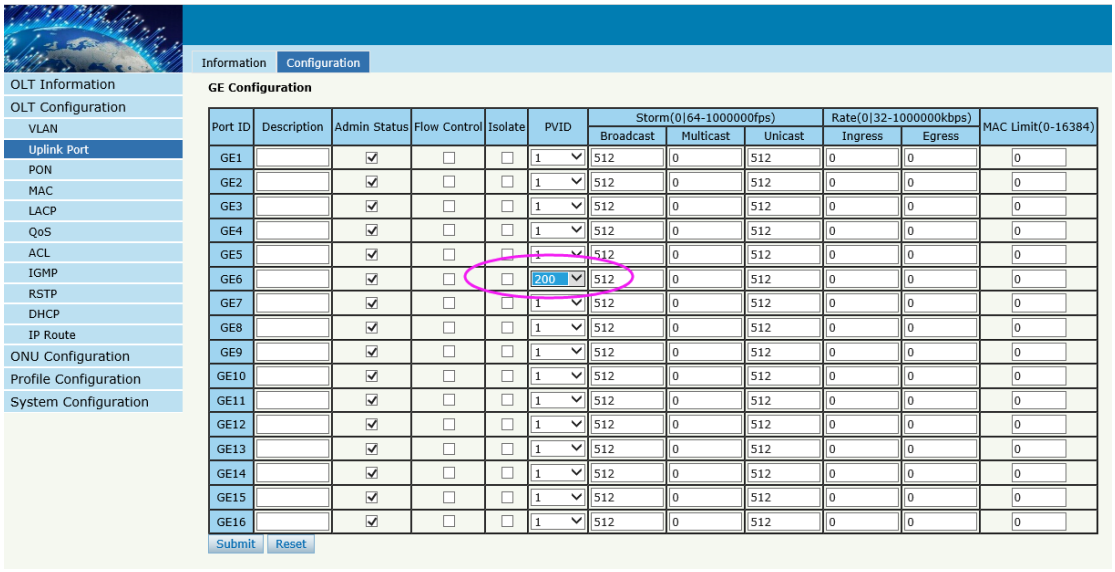
## By Web ----------

1, create a new VLAN




2.configure GE VLAN mode






# Configuring the ONU

## By CLI ----------

gpon-olt(config-pon-0/1)# onu 1 tcont 1 dba dba_1

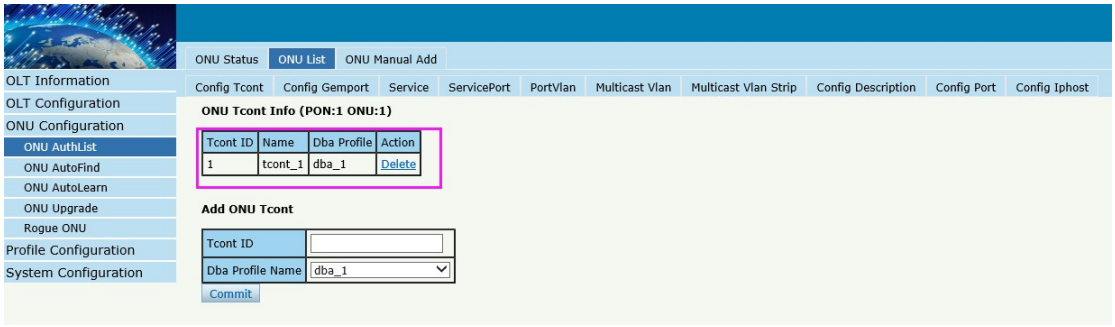
gpon-olt(config-pon-0/1)# onu 1 gemport 2 tcont 1

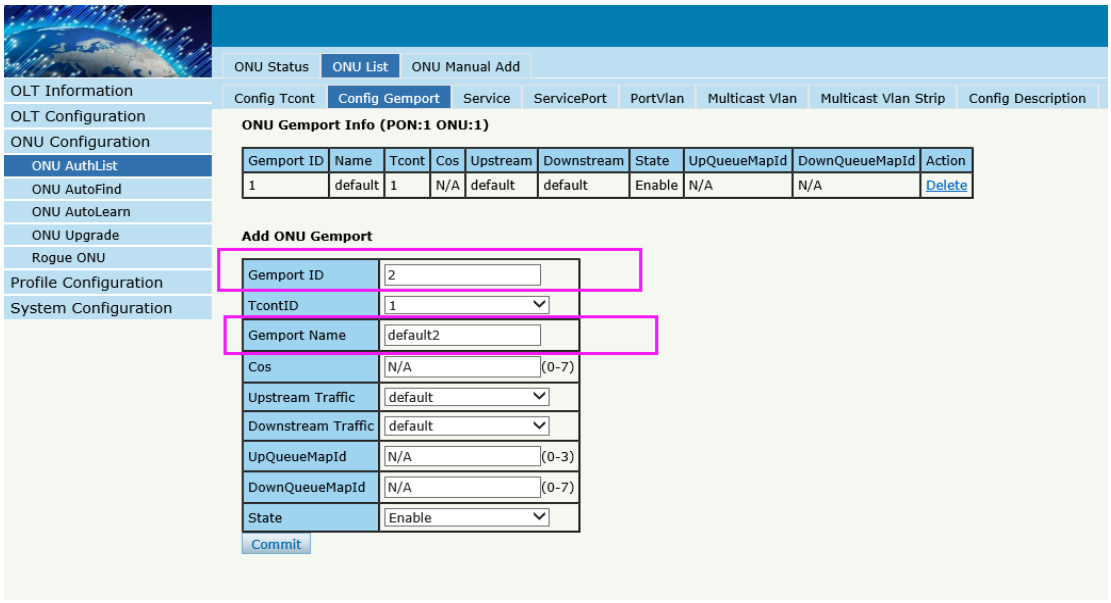
gpon-olt(config-pon-0/1)# onu 1 service 1 gemport 2 vlan 200

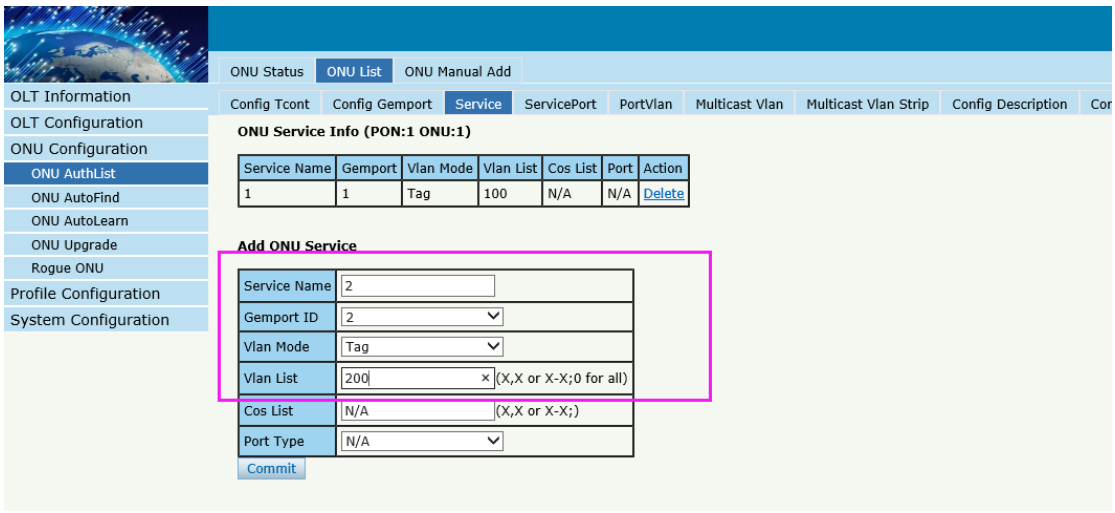
gpon-olt(config-pon-0/1)# onu 1 service-port 1 gemport 2 uservlan 200 to 200 transparent

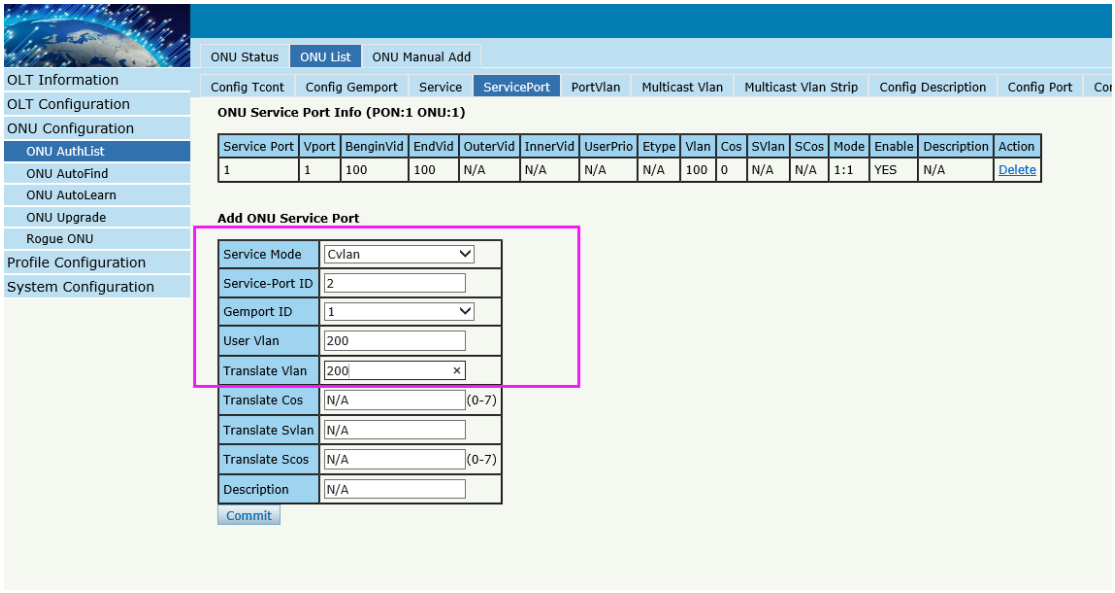
## By web ----------

Configure ONU



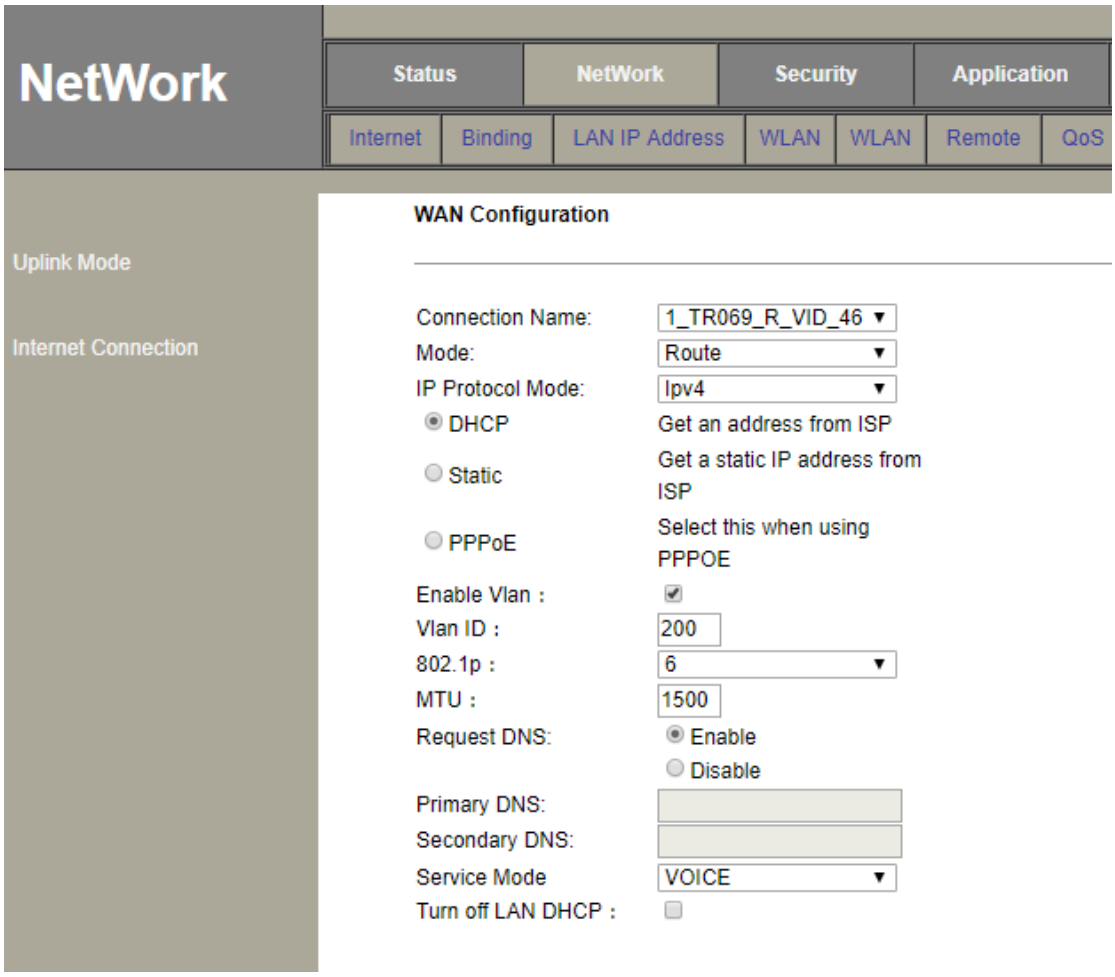

ONU Status
ONU List
ONU Manual Add
OLT Information
OLT Configuration
ONU Configuration
ONU AuthList
ONU AutoFind
ONU AutoLearn
ONU Upgrade
Rogue ONU
Profile Configuration
System Configuration
Config Tcont
Config Gemport
Service
ServicePort
PortVlan
Multicast Vlan
Multicast Vlan Strip
Config Description
ONU Gemport Info (PON:1 ONU:1)
Gemport ID
Name
Tcont
Cos
Upstream
Downstream
State
UpQueueMapId
DownQueueMapId
Action
1
default
1
N/A
default
default
Enable
N/A
N/A
Delete
Add ONU Gemport
Gemport ID
2
TcontID
1
Gemport Name
default2
Cos
N/A
(0-7)
Upstream Traffic
default
Downstream Traffic
default
UpQueueMapId
N/A
(0-3)
DownQueueMapId
N/A
(0-7)
State
Enable
Commit


ONU Status
ONU List
ONU Manual Add
OLT Information
OLT Configuration
ONU Configuration
ONU AuthList
ONU AutoFind
ONU AutoLearn
ONU Upgrade
Rogue ONU
Profile Configuration
System Configuration
Config Tcont
Config Gemport
Service
ServicePort
PortVlan
Multicast Vlan
Multicast Vlan Strip
Config Description
ONU Service Info (PON:1 ONU:1)
Service Name
Gemport
Vlan Mode
Vlan List
Cos List
Port
Action
1
1
Tag
100
N/A
N/A
Delete
Add ONU Service
Service Name
2
Gemport ID
2
Vlan Mode
Tag
Vlan List
200
(X,X or X-X;0 for all)
Cos List
N/A
(X,X or X-X;)
Port Type
N/A
Commit

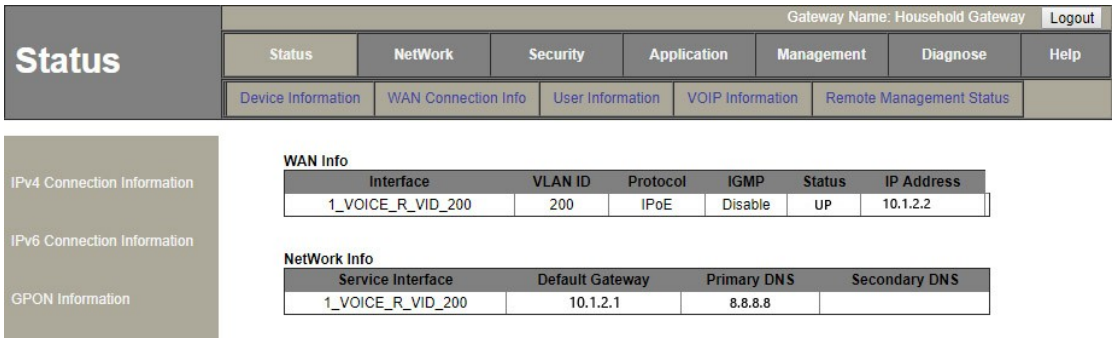


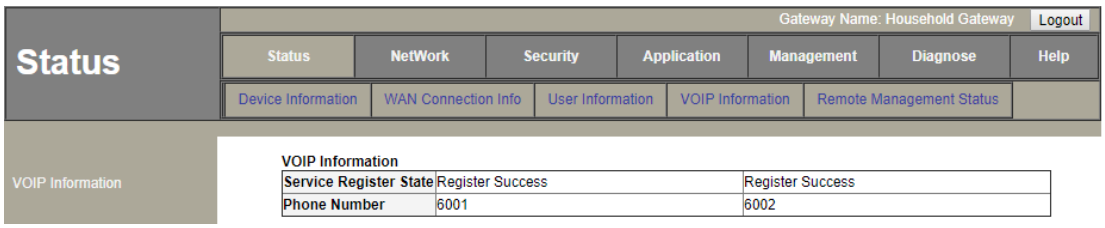

## By ONU web ----------

If DHCP mode

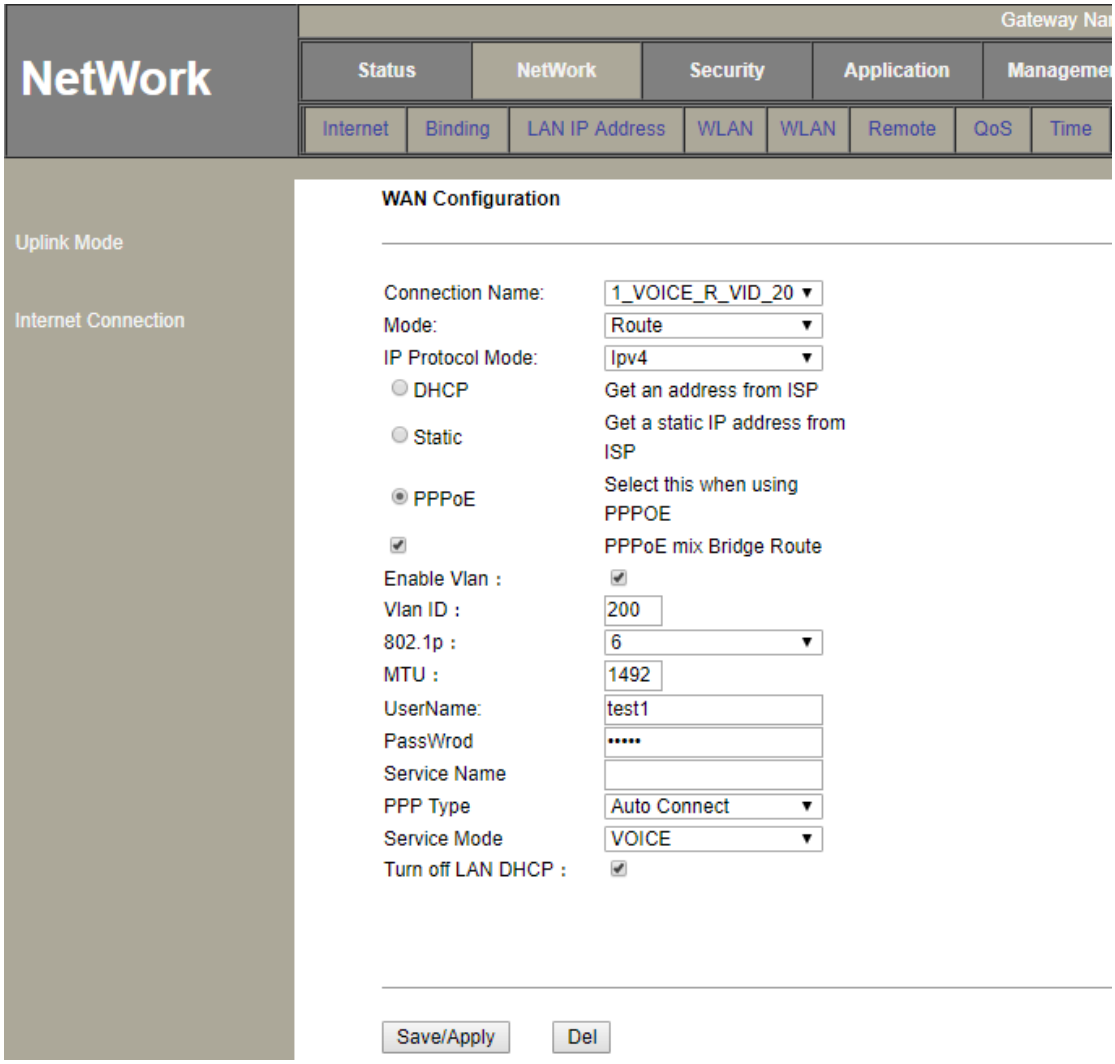



The connection status

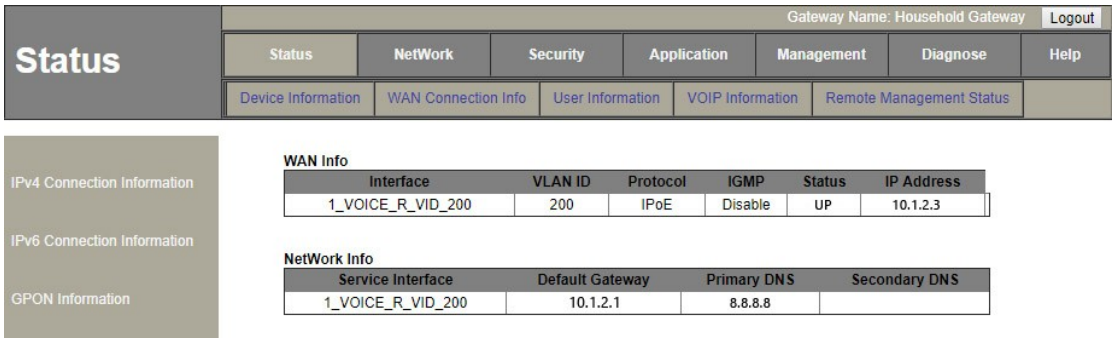


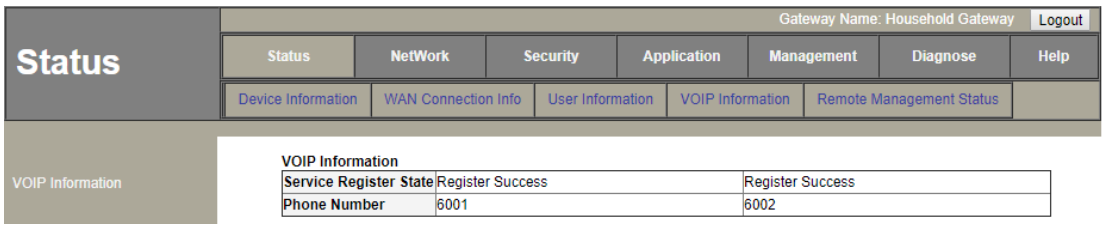




If PPPoE mode

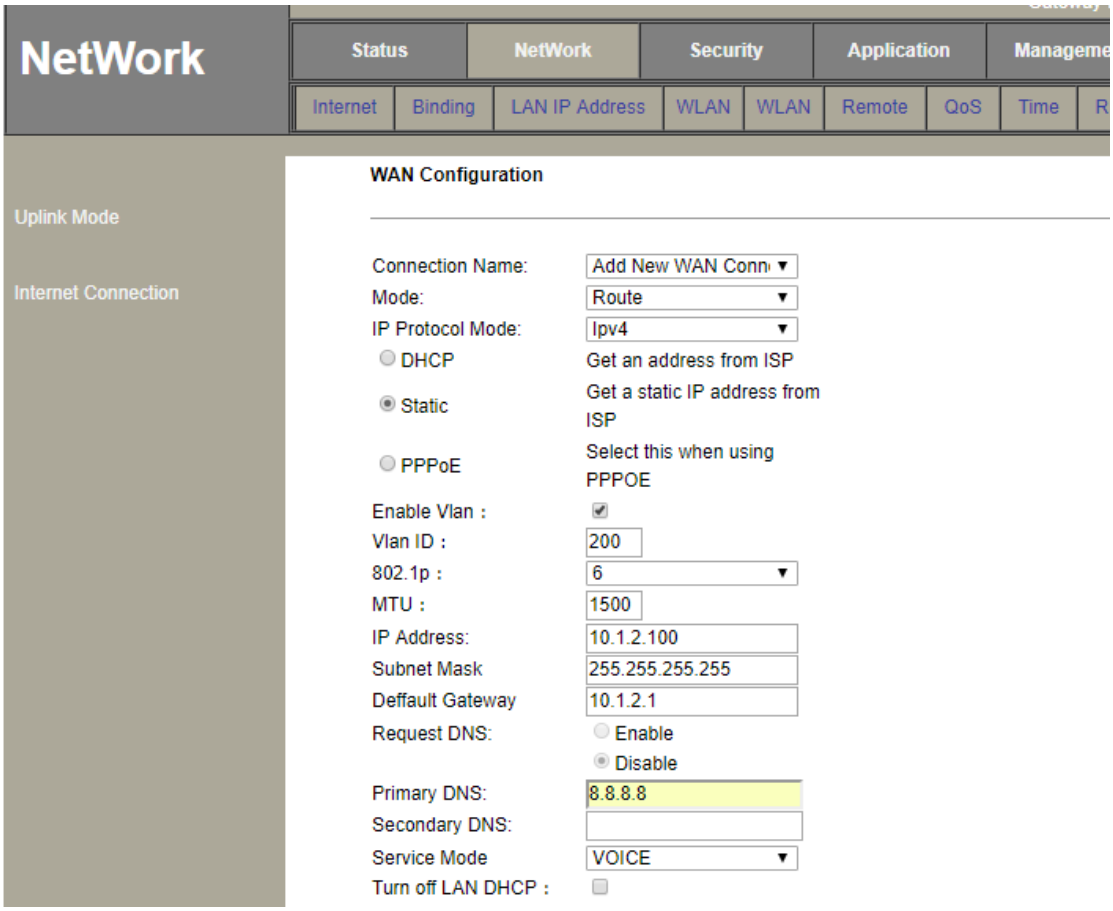



The connection status

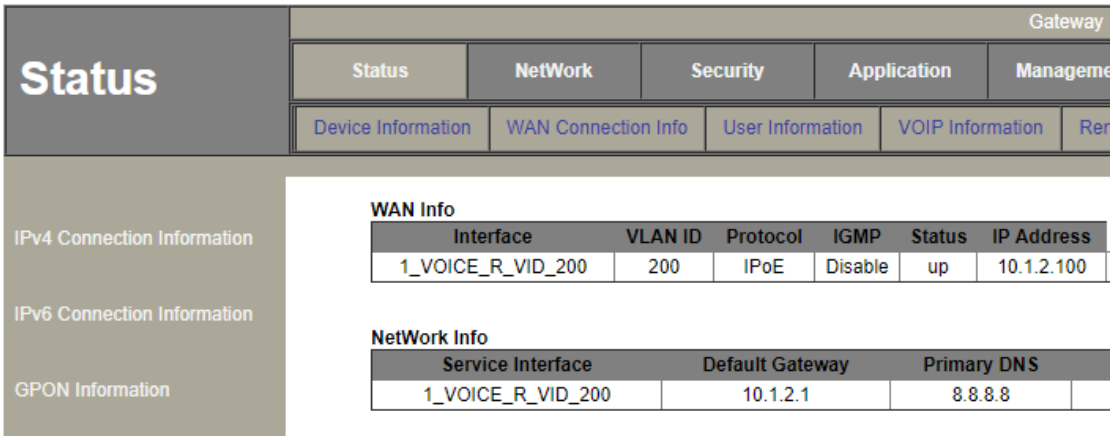


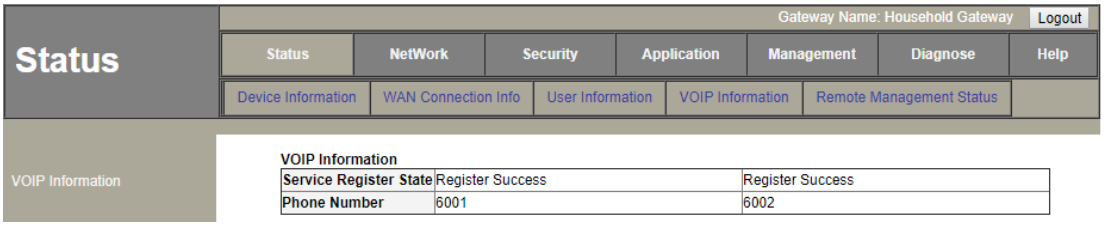




If Static mode

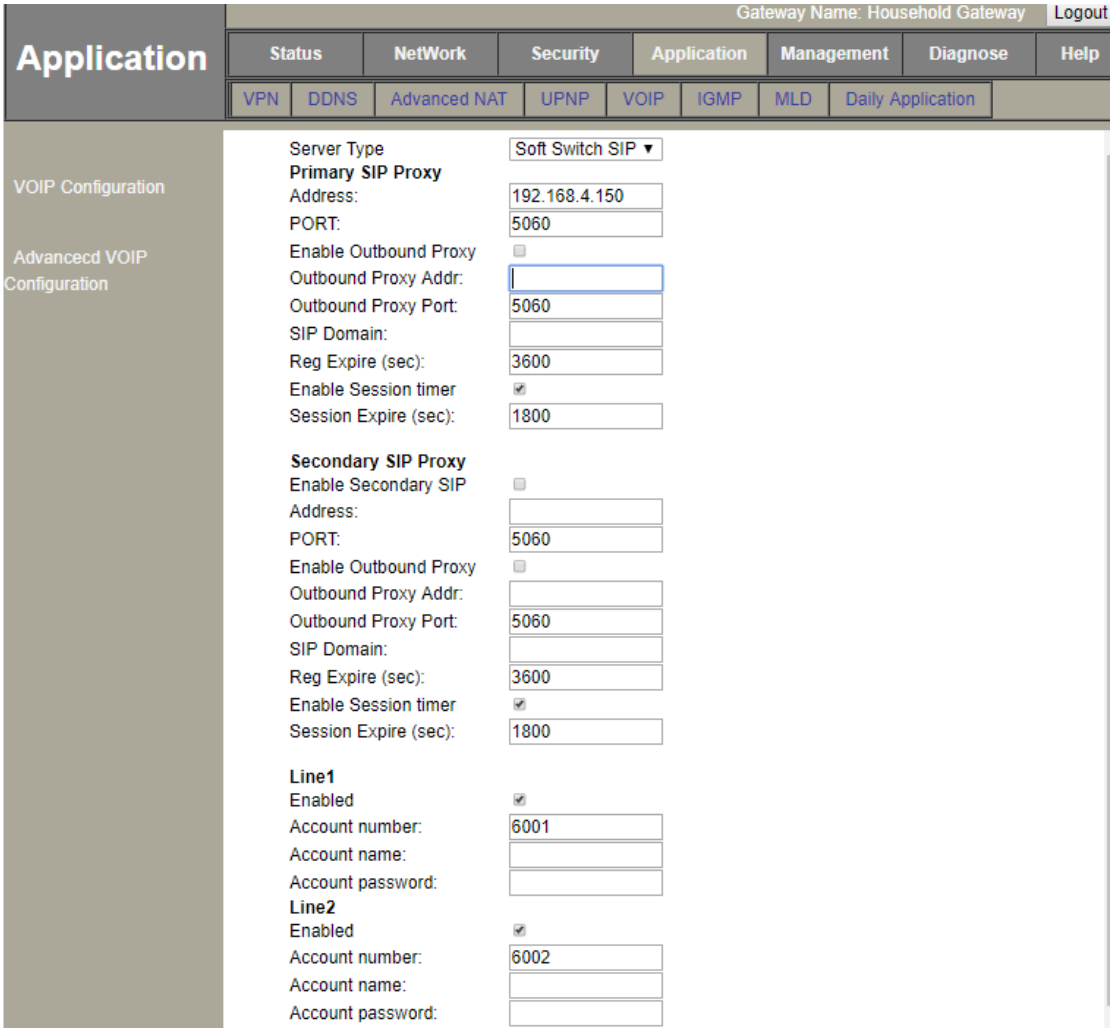



The connection status


Status
Gateway
Status
NetWork
Security
Application
Manageme
Device Information
WAN Connection Info
User Information
VOIP Information
Rer
IPv4 Connection Information
IPv6 Connection Information
GPON Information
WAN Info
Interface
VLAN ID
Protocol
IGMP
Status
IP Address
1_VOICE_R_VID_200
200
IPoE
Disable
up
10.1.2.100
NetWork Info
Service Interface
Default Gateway
Primary DNS
1_VOICE_R_VID_200
10.1.2.1
8.8.8.8

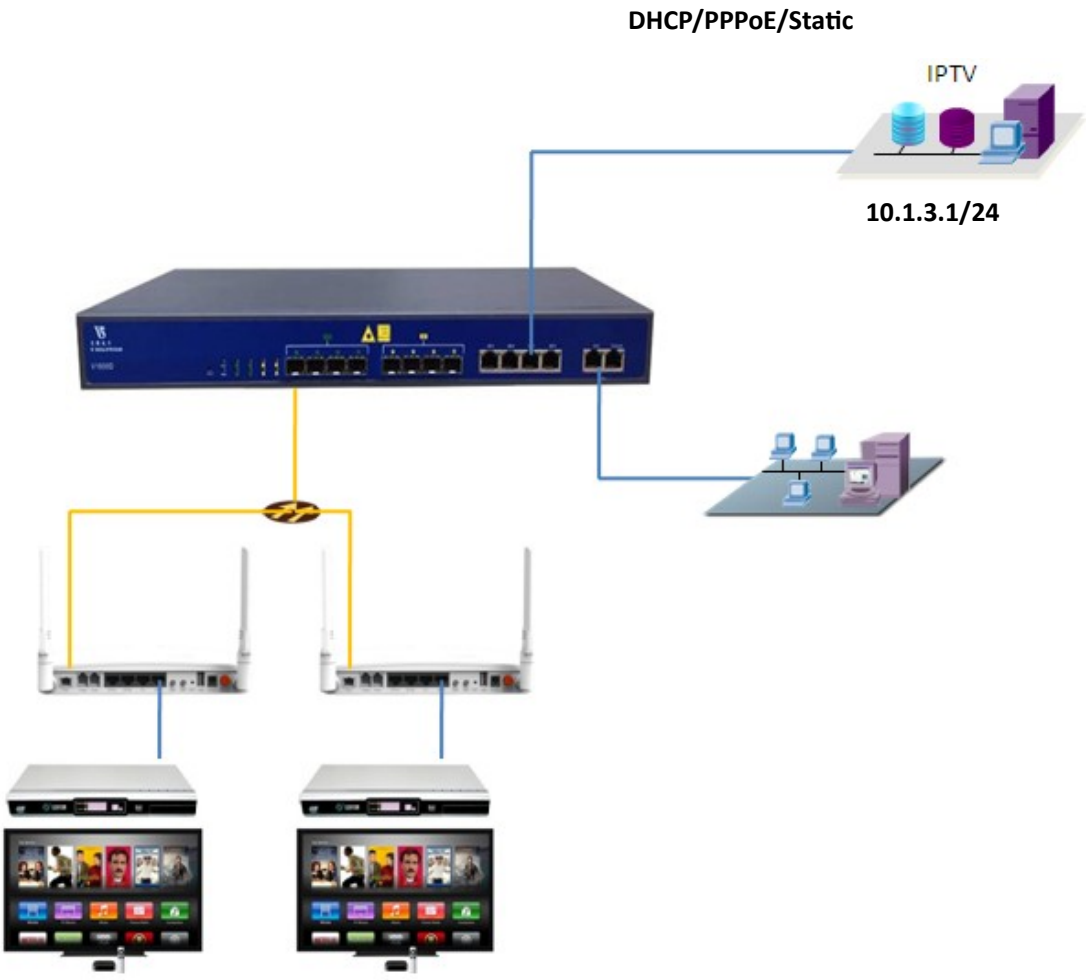

Status
Gateway Name: Household Gateway
Logout
Status
NetWork
Security
Application
Management
Diagnose
Help
Device Information
WAN Connection Info
User Information
VOIP Information
Remote Management Status
VOIP Information
VOIP Information
Service Register State
Register Success
Register Success
Phone Number
6001
6002

VoIP


Application
Gateway Name: Household Gateway
Logout
Status
NetWork
Security
Application
Management
Diagnose
Help
VPN
DDNS
Advanced NAT
UPNP
VOIP
IGMP
MLD
Daily Application
VOIP Configuration
Advancecd VOIP Configuration
Server Type
Soft Switch SIP
Primary SIP Proxy
Address:
192.168.4.150
PORT:
5060
Enable Outbound Proxy
Outbound Proxy Addr:
Outbound Proxy Port:
5060
SIP Domain:
Reg Expire (sec):
3600
Enable Session timer
Session Expire (sec):
1800
Secondary SIP Proxy
Enable Secondary SIP
Address:
PORT:
5060
Enable Outbound Proxy
Outbound Proxy Addr:
Outbound Proxy Port:
5060
SIP Domain:
Reg Expire (sec):
3600
Enable Session timer
Session Expire (sec):
1800
Line1
Enabled
Account number:
6001
Account name:
Account password:
Line2
Enabled
Account number:
6002
Account name:
Account password:

# Case 6 HGU Bridge --IPTV

## Network Diagram




## Planning Data

| Item | | Description | Example |
|---|---|---|---|
| ONU Information | Slot No. | The number of the slot actually used. | 0 |
| | PON No. | The number of the actually used | 1 |

| | | | |
|---|---|---|---|
| | | PON port. | |
| | ONU Auth No. | Configure according to the network planning of theoperator. | 1 |
| | ONU Type | The type of the ONU. | HG326RGW |
| OLT | Service Uplink VLAN | The VLAN ID of the uplink port service. | VLAN mode = UNTAG<br>PVID = 300 |
| | Service Uplink port | Configure according to the number of the actuallyused uplink port. | GE7 |
| | Service PON VLAN | The VLAN ID of the PON port service. | VLAN mode = TAG<br>VLAN ID = 300 |
| | Service PON port | Configure according to the number of the actuallyused PON port. | PON1 |
| ONU | Service WAN VLAN | The VLAN ID of the PON(WAN) port service. | VLAN mode= Transparent |
| | Service LAN VLAN | The VLAN ID of the LAN port service. | VLAN mode = UNTAG<br>LAN VLAN ID = 300<br>Multicast VLAN ID = 300 |
| | Service LAN port | The number of the actually used ONU port. | LAN4 |
| | Tcont | The onu Tcont | Tcont=1 |
| | Gemport | The onu Gemport | Gemport=1 |
| | Dba | The ONU dba profile | Dba name=dba_1<br>Dba type = 3 |
| | Service vlan | The vlan of ONU service. | Service Vlan = 100 |
| | Service-port uservlan | The vlan of onu service-port | Service-port vlan =100 |
| STB | Managemen t IP | The IP for STB. | Gateway = 10.1.3.1<br>IP = 10.1.3.100<br>IP Mask = 255.255.255.0 |

# Configuring the OLT

**By CLI ----------**

gpon-olt(config)# vlan 300

gpon-olt(config-vlan-100)# exit

gpon-olt(config)# interface gigabitethernet 0/7

gpon-olt(config-if-ge0/7)# switchport hybrid vlan 300 untagged

gpon-olt(config-if-ge0/7)# switchport hybrid pvid vlan 300

gpon-olt(config-if-ge0/7)# exit

gpon-olt(config)# ip igmp snooping enable

gpon-olt(config)# ip igmp snooping general-query-packet enable

gpon-olt(config)# ip igmp snooping mrouter vlan 300 interface gigabitethernet 0/7

gpon-olt(config)#ip igmp snooping mvlan 300 unknown-multicast drop igmp trap-to-cpu

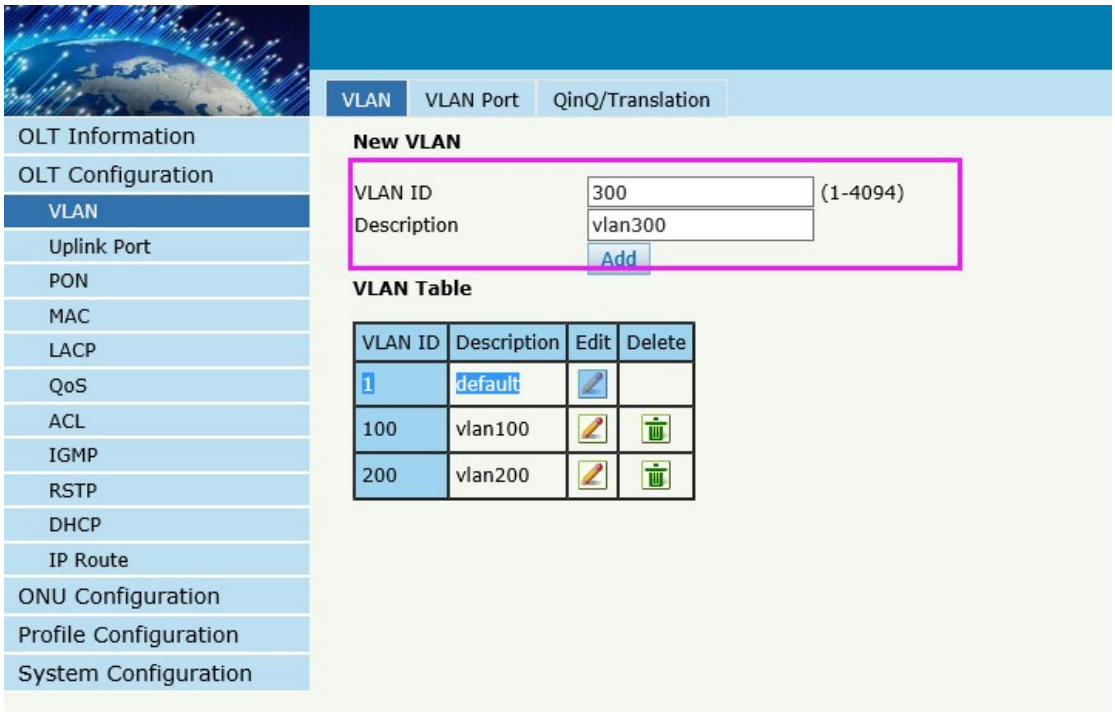
gpon-olt(config)# interface gpon 0/1

gpon-olt(config-pon-0/1)# ip igmp snooping user-vlan 300 group-vlan 300 tagged

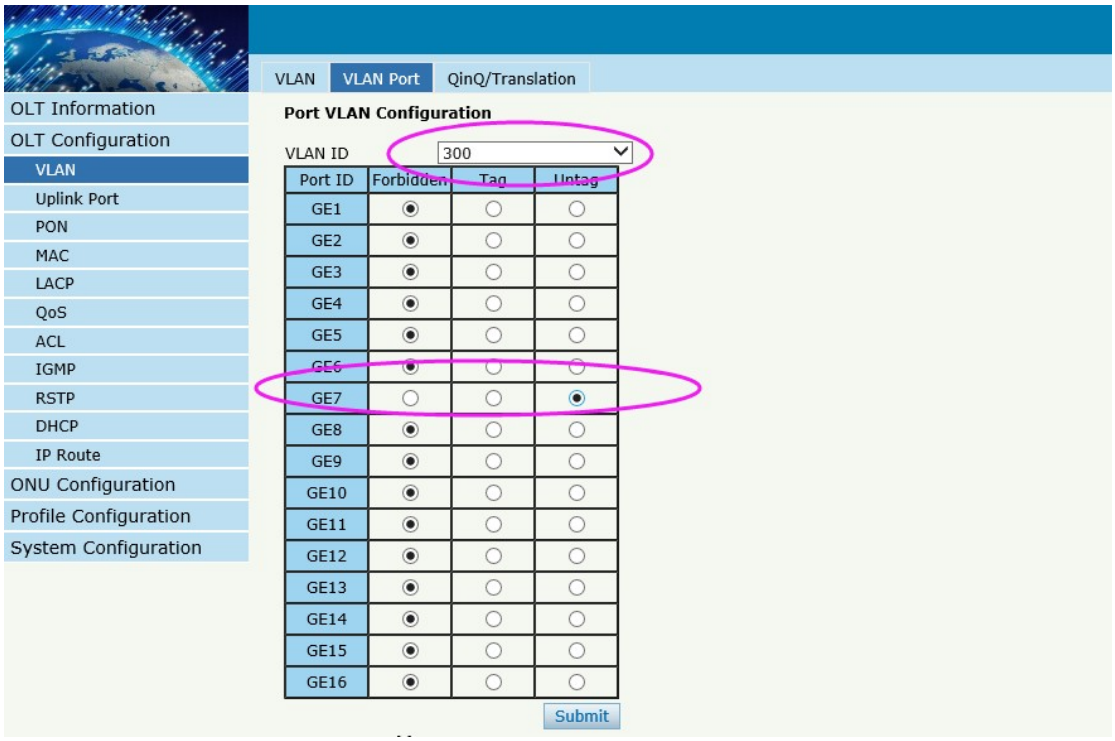
gpon-olt(config-pon-0/1)# exit

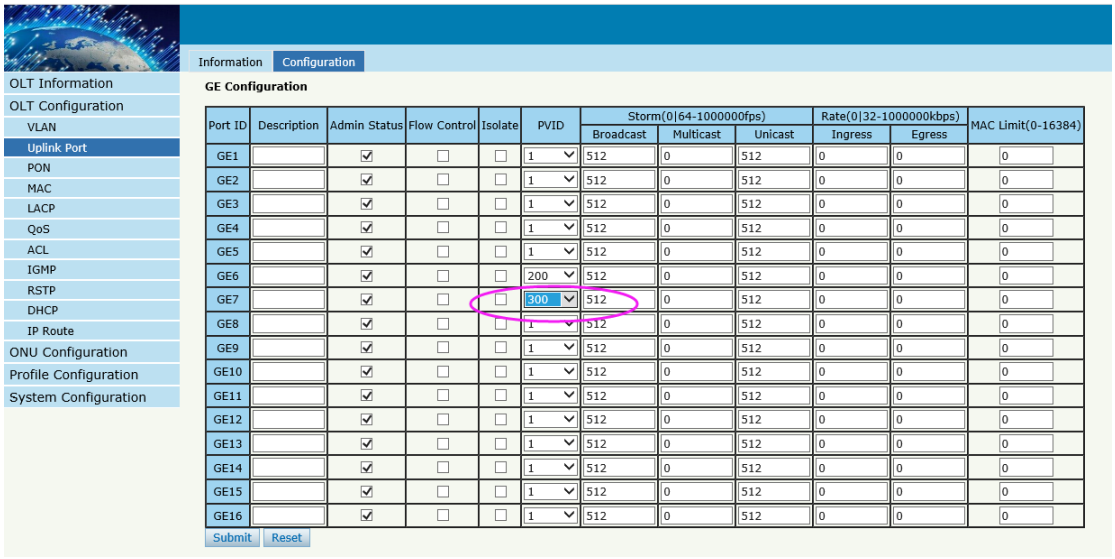
**By web ----------**

1\create a new VLAN for IGMP

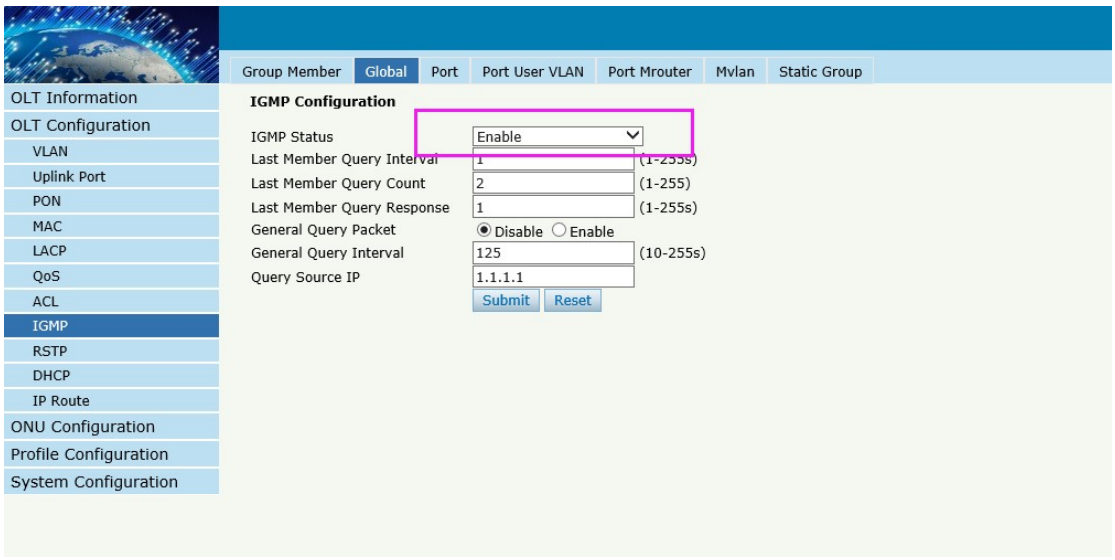


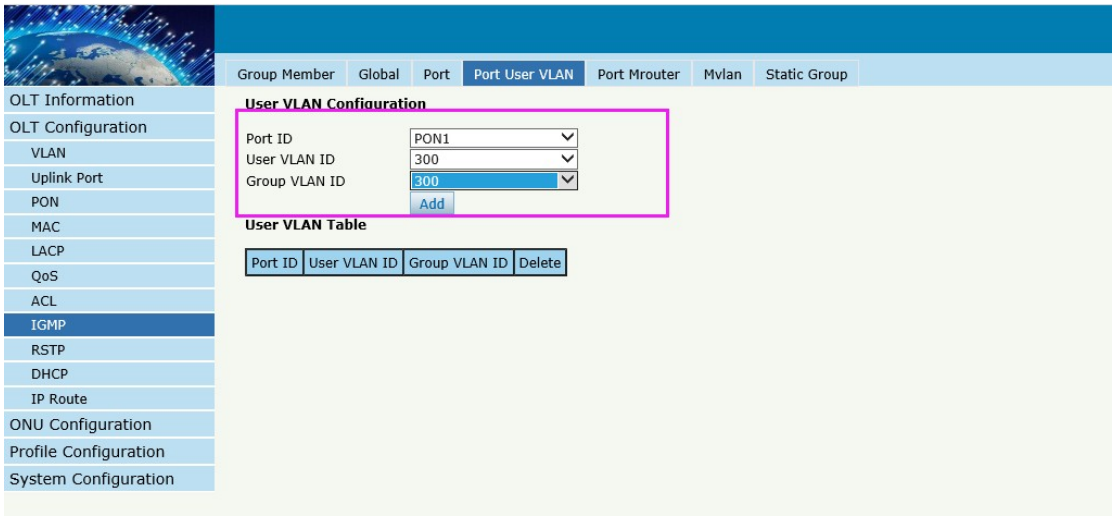

2, configure VLAN mode

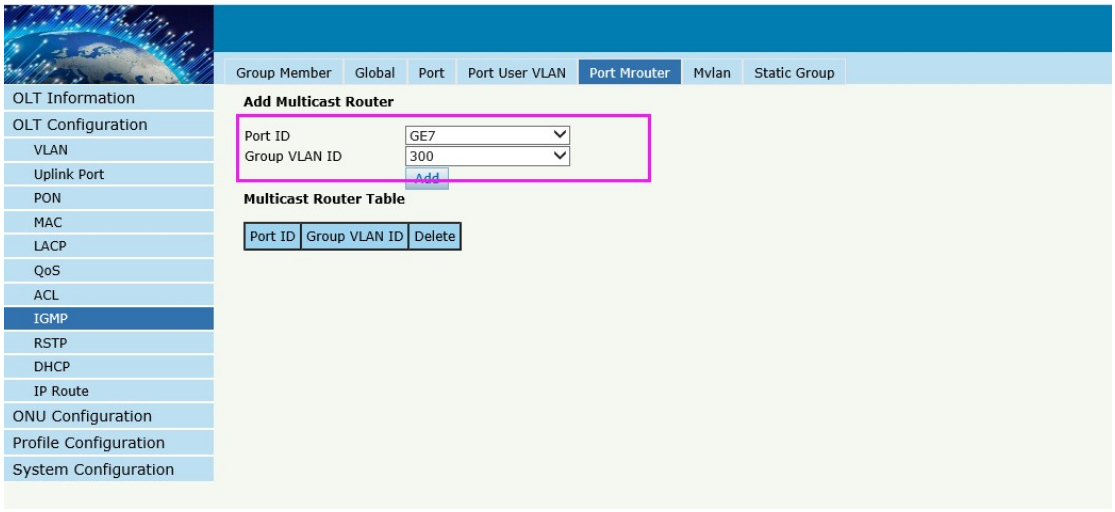


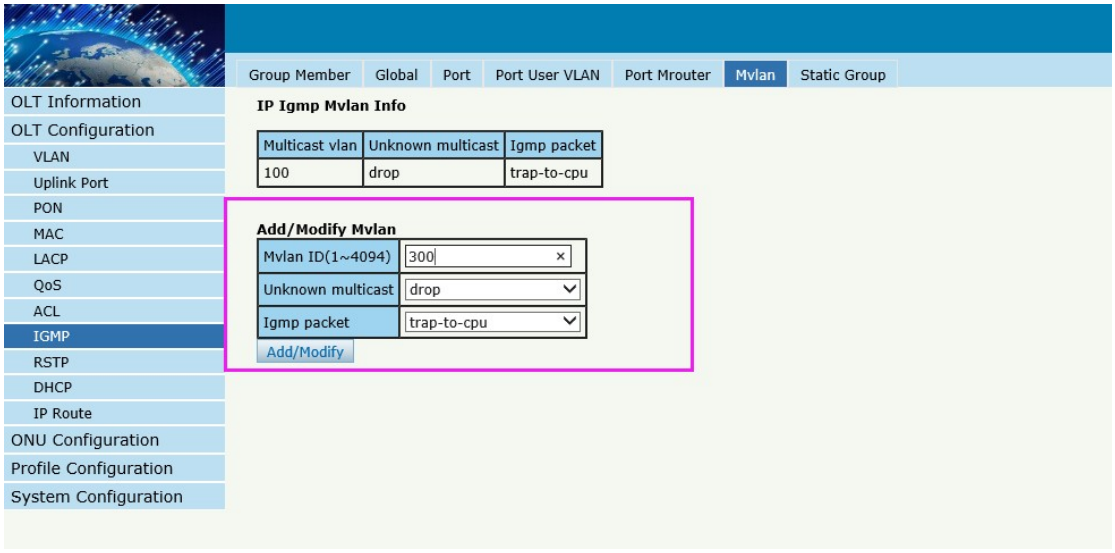




3,enable IGMP snooping function


Group Member
Global
Port
Port User VLAN
Port Mrouter
Mvlan
Static Group
OLT Information
OLT Configuration
VLAN
Uplink Port
PON
MAC
LACP
QoS
ACL
IGMP
RSTP
DHCP
IP Route
ONU Configuration
Profile Configuration
System Configuration
IGMP Configuration
IGMP Status
Enable
Last Member Query Interval
1
(1-255s)
Last Member Query Count
2
(1-255)
Last Member Query Response
1
(1-255s)
General Query Packet
Disable
Enable
General Query Interval
125
(10-255s)
Query Source IP
1.1.1.1
Submit
Reset


Group Member
Global
Port
Port User VLAN
Port Mrouter
Mvlan
Static Group
OLT Information
OLT Configuration
VLAN
Uplink Port
PON
MAC
LACP
QoS
ACL
IGMP
RSTP
DHCP
IP Route
ONU Configuration
Profile Configuration
System Configuration
User VLAN Configuration
Port ID
PON1
User VLAN ID
300
Group VLAN ID
300
Add
User VLAN Table
Port ID
User VLAN ID
Group VLAN ID
Delete


Group Member
Global
Port
Port User VLAN
Port Mrouter
Mvlan
Static Group
OLT Information
OLT Configuration
VLAN
Uplink Port
PON
MAC
LACP
QoS
ACL
IGMP
RSTP
DHCP
IP Route
ONU Configuration
Profile Configuration
System Configuration
Add Multicast Router
Port ID
GE7
Group VLAN ID
300
Add
Multicast Router Table
Port ID
Group VLAN ID
Delete




# Configuring the ONU

**By CLI ----------**

pon-olt(config)# interface gpon  0/1

gpon-olt(config-pon-0/1)# onu 1 tcont 1 dba dba_1

gpon-olt(config-pon-0/1)# onu 1 gemport 3 tcont 1

gpon-olt(config-pon-0/1)# onu 1 service 1 gemport 3 vlan 300

gpon-olt(config-pon-0/1)# onu 1 service-port 1 gemport 3 uservlan 300 to 300 transparent

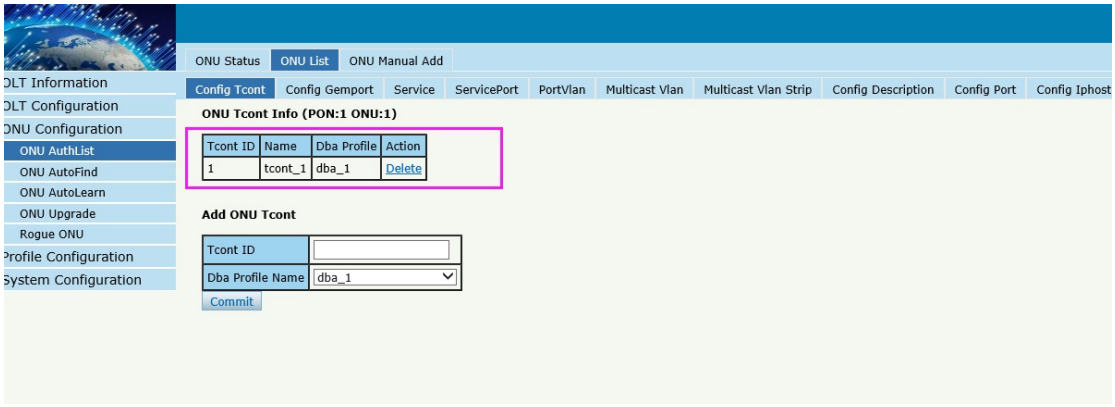
gpon-olt(config-pon-0/1)# onu 1 mvlan 300

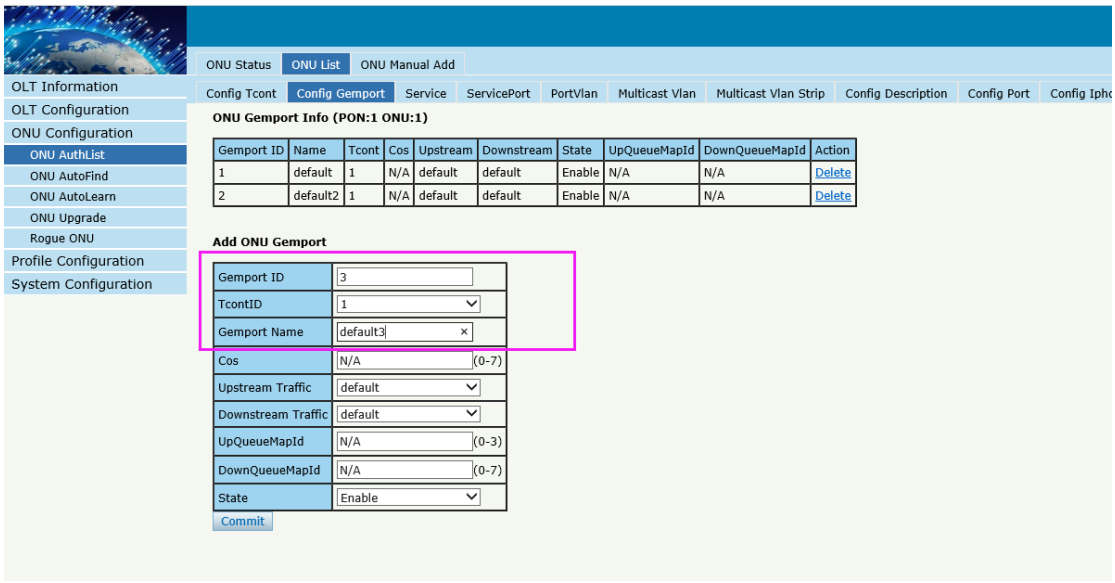
gpon-olt(config-pon-0/1)# onu 1 mvlan tag-strip eth 1

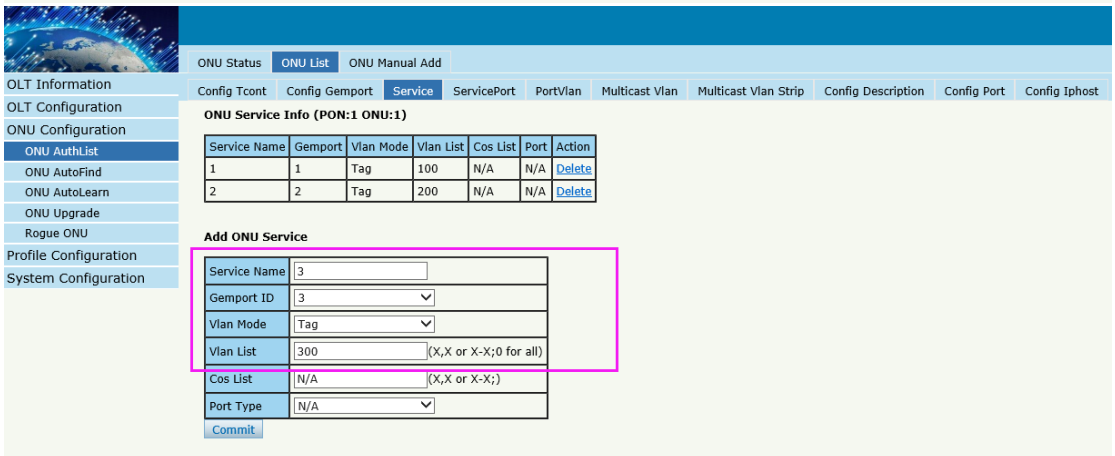
gpon-olt(config-pon-0/1)# exit

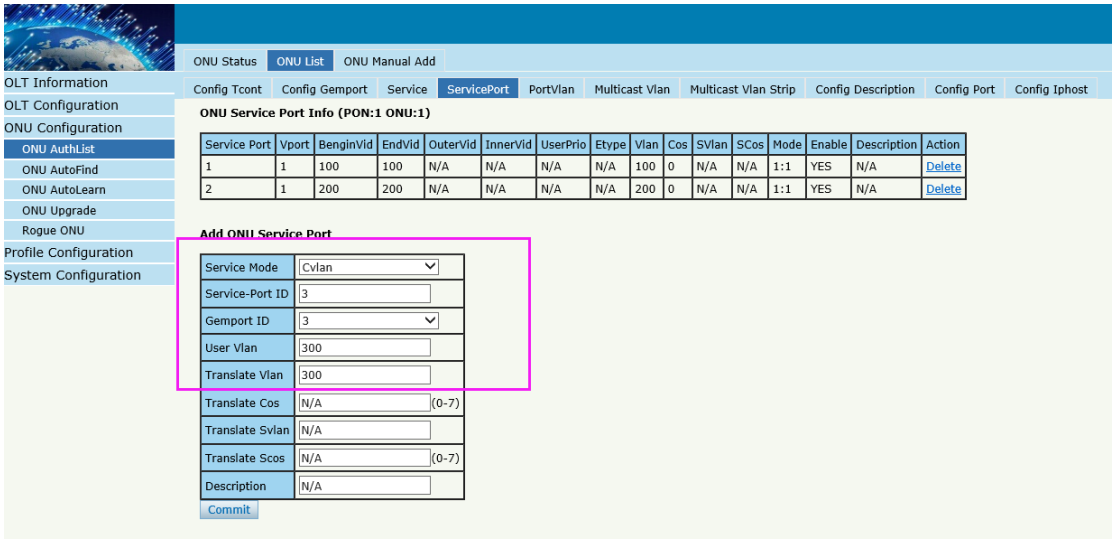
**By web ----------**

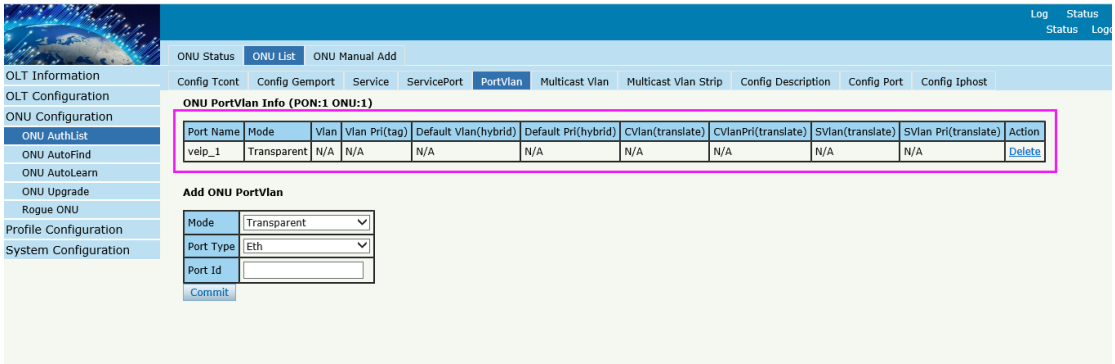
Configure ONU

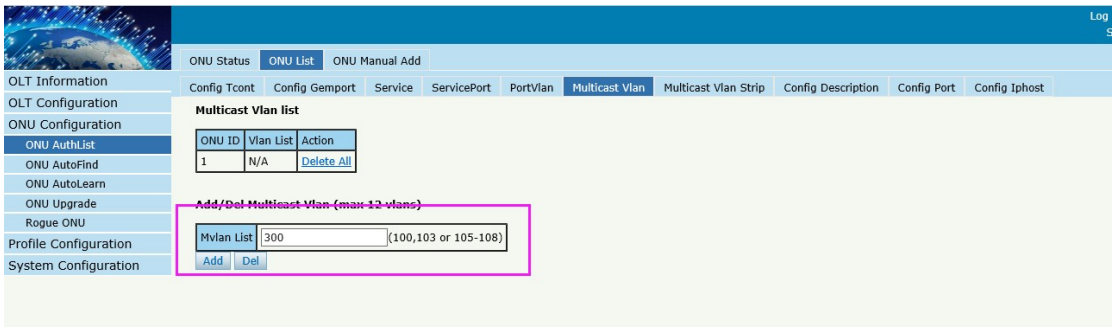

ONU Status
ONU List
ONU Manual Add
OLT Information
OLT Configuration
ONU Configuration
ONU AuthList
ONU AutoFind
ONU AutoLearn
ONU Upgrade
Rogue ONU
Profile Configuration
System Configuration
Config Tcont
Config Gemport
Service
ServicePort
PortVlan
Multicast Vlan
Multicast Vlan Strip
Config Description
Config Port
Config Iphost
ONU Tcont Info (PON:1 ONU:1)
Tcont ID
Name
Dba Profile
Action
1
tcont_1
dba_1
Delete
Add ONU Tcont
Tcont ID
Dba Profile Name
dba_1
Commit

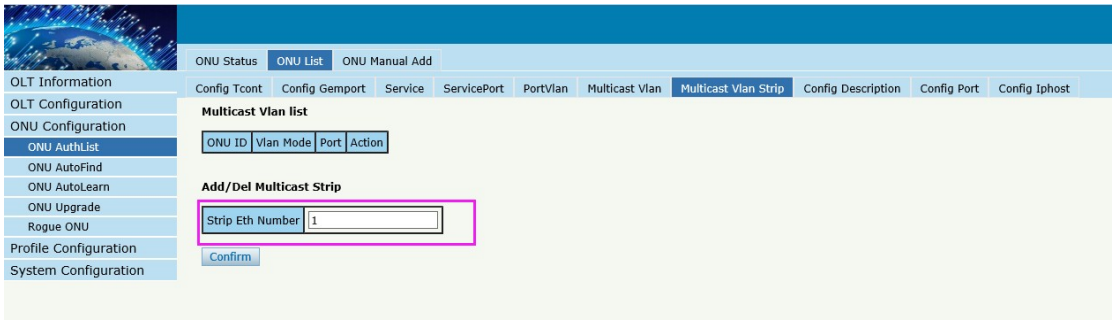

ONU Status
ONU List
ONU Manual Add
OLT Information
OLT Configuration
ONU Configuration
ONU AuthList
ONU AutoFind
ONU AutoLearn
ONU Upgrade
Rogue ONU
Profile Configuration
System Configuration
Config Tcont
Config Gemport
Service
ServicePort
PortVlan
Multicast Vlan
Multicast Vlan Strip
Config Description
Config Port
ONU Gemport Info (PON:1 ONU:1)
Gemport ID
Name
Tcont
Cos
Upstream
Downstream
State
UpQueueMapId
DownQueueMapId
Action
1
default
1
N/A
default
default
Enable
N/A
N/A
Delete
2
default2
1
N/A
default
default
Enable
N/A
N/A
Delete
Add ONU Gemport
Gemport ID
3
TcontID
1
Gemport Name
default3
Cos
N/A
(0-7)
Upstream Traffic
default
Downstream Traffic
default
UpQueueMapId
N/A
(0-3)
DownQueueMapId
N/A
(0-7)
State
Enable
Commit


ONU Status
ONU List
ONU Manual Add
OLT Information
OLT Configuration
ONU Configuration
ONU AuthList
ONU AutoFind
ONU AutoLearn
ONU Upgrade
Rogue ONU
Profile Configuration
System Configuration
Config Tcont
Config Gemport
Service
ServicePort
PortVlan
Multicast Vlan
Multicast Vlan Strip
Config Description
Config Port
Config Iphost
ONU Service Info (PON:1 ONU:1)
Service Name
Gemport
Vlan Mode
Vlan List
Cos List
Port
Action
1
1
Tag
100
N/A
N/A
Delete
2
2
Tag
200
N/A
N/A
Delete
Add ONU Service
Service Name
3
Gemport ID
3
Vlan Mode
Tag
Vlan List
300
(X,X or X-X;0 for all)
Cos List
N/A
(X,X or X-X;)
Port Type
N/A
Commit

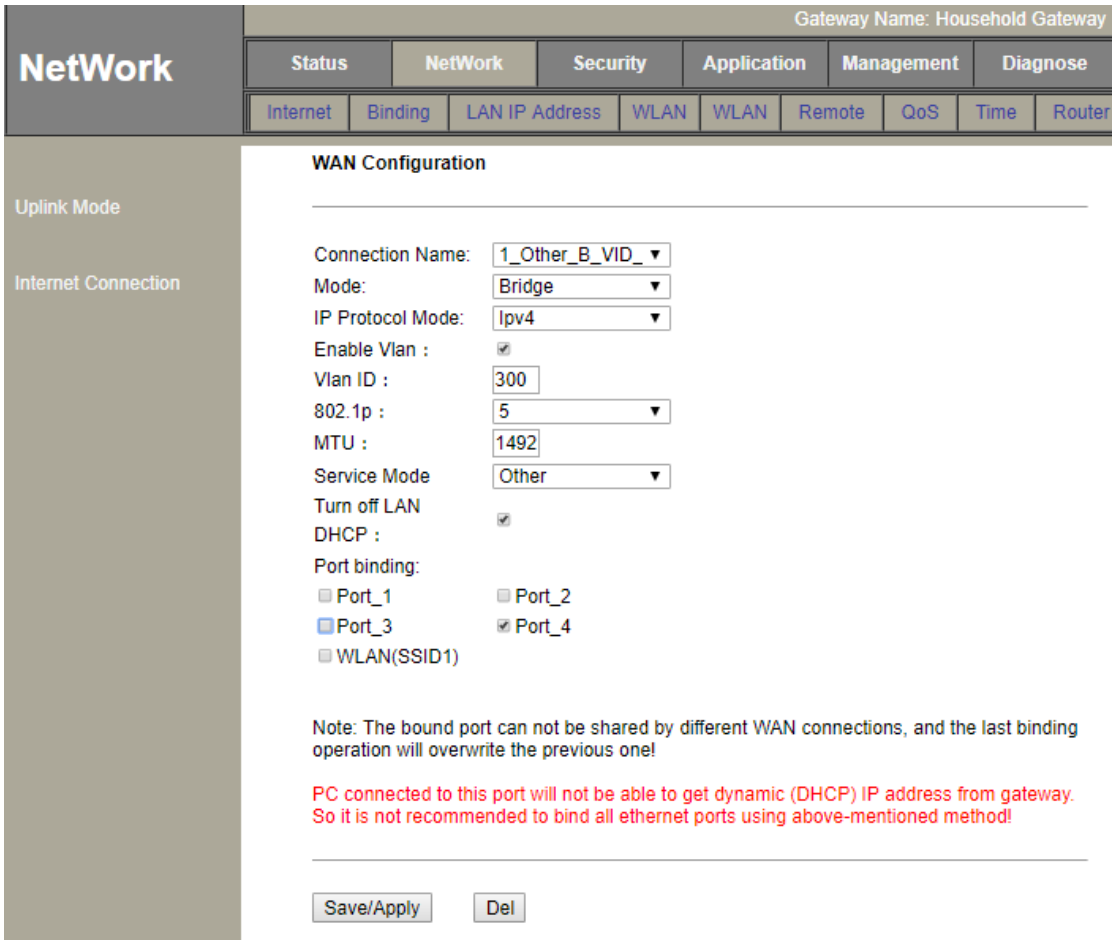

ONU Status
ONU List
ONU Manual Add
Config Tcont
Config Gemport
Service
ServicePort
PortVlan
Multicast Vlan
Multicast Vlan Strip
Config Description
Config Port
Config Iphost
OLT Information
OLT Configuration
ONU Configuration
ONU AuthList
ONU AutoFind
ONU AutoLearn
ONU Upgrade
Rogue ONU
Profile Configuration
System Configuration
ONU Service Port Info (PON:1 ONU:1)
Service Port
Vport
BenginVid
EndVid
OuterVid
InnerVid
UserPrio
Etype
Vlan
Cos
SVlan
SCos
Mode
Enable
Description
Action
1 1 100 100 N/A N/A N/A N/A 100 0 N/A N/A 1:1 YES N/A Delete
2 1 200 200 N/A N/A N/A N/A 200 0 N/A N/A 1:1 YES N/A Delete
Add ONU Service Port
Service Mode
Cvlan
Service-Port ID
3
Gemport ID
3
User Vlan
300
Translate Vlan
300
Translate Cos
N/A
(0-7)
Translate Svlan
N/A
Translate Scos
N/A
(0-7)
Description
N/A
Commit


Log
Status
ONU Status
ONU List
ONU Manual Add
Config Tcont
Config Gemport
Service
ServicePort
PortVlan
Multicast Vlan
Multicast Vlan Strip
Config Description
Config Port
Config Iphost
OLT Information
OLT Configuration
ONU Configuration
ONU AuthList
ONU AutoFind
ONU AutoLearn
ONU Upgrade
Rogue ONU
Profile Configuration
System Configuration
ONU PortVlan Info (PON:1 ONU:1)
Port Name
Mode
Vlan
Vlan Pri(tag)
Default Vlan(hybrid)
Default Pri(hybrid)
CVlan(translate)
CVlanPri(translate)
SVlan(translate)
SVlan Pri(translate)
Action
veip_1 Transparent N/A N/A N/A N/A N/A N/A N/A N/A Delete
Add ONU PortVlan
Mode
Transparent
Port Type
Eth
Port Id
Commit


Log
ONU Status
ONU List
ONU Manual Add
Config Tcont
Config Gemport
Service
ServicePort
PortVlan
Multicast Vlan
Multicast Vlan Strip
Config Description
Config Port
Config Iphost
OLT Information
OLT Configuration
ONU Configuration
ONU AuthList
ONU AutoFind
ONU AutoLearn
ONU Upgrade
Rogue ONU
Profile Configuration
System Configuration
Multicast Vlan list
ONU ID
Vlan List
Action
1 N/A Delete All
Add/Del Multicast Vlan (max 12 vlans)
Mvlan List
300
(100,103 or 105-108)
Add
Del


ONU Status
ONU List
ONU Manual Add
Config Tcont
Config Gemport
Service
ServicePort
PortVlan
Multicast Vlan
Multicast Vlan Strip
Config Description
Config Port
Config Iphost
OLT Information
OLT Configuration
ONU Configuration
ONU AuthList
ONU AutoFind
ONU AutoLearn
ONU Upgrade
Rogue ONU
Profile Configuration
System Configuration
Multicast Vlan list
ONU ID
Vlan Mode
Port
Action
Add/Del Multicast Strip
Strip Eth Number
1
Confirm

## By ONU web ----------


NetWork
Gateway Name: Household Gateway
Status
NetWork
Security
Application
Management
Diagnose
Internet
Binding
LAN IP Address
WLAN
WLAN
Remote
QoS
Time
Router
Uplink Mode
Internet Connection
WAN Configuration
Connection Name: 1_Other_B_VID_
Mode: Bridge
IP Protocol Mode: Ipv4
Enable Vlan :
Vlan ID : 300
802.1p : 5
MTU : 1492
Service Mode Other
Turn off LAN DHCP :
Port binding:
Port_1
Port_2
Port_3
Port_4
WLAN(SSID1)
Note: The bound port can not be shared by different WAN connections, and the last binding operation will overwrite the previous one!
PC connected to this port will not be able to get dynamic (DHCP) IP address from gateway. So it is not recommended to bind all ethernet ports using above-mentioned method!
Save/Apply
Del